ST*C-Biotech/ChemLib

164583

From:

Whiteman, Brian

Sent:

Thursday, September 01, 2005 9:49 AM

To:

STIC-Biotech/ChemLib

Subject:

seq search

09/818943 Eriksson et al. 3/28/01

SEQ ID NO: 1 and 2 1) interference search

Thank you,

Brian Whiteman Remsen, 2D14 mail box 2C18 Patent Examiner - Art Unit 1635 United States Patent and Trademark Office (571) 272-0764

SEARCHER: ______Searcher: ______Searcher Phone: 2-Date Searcher Picked up: _____Date Completed: ______

Searcher Prep/Rev. Time:____
Online Time:____

Type of Search

NA#:	AA#:
	SPDI:
S/L:	Oligomer:
Encode/Tran	ısl:
Structure#:	Text:
nventor:	Litigation:

LEXIS/NEXIS:______SEQUENCE SYSTEM:_____ WWW/Internet:_____

Other(Specify):_

FAGE BLANK (USPTO)

THIS PAGE BLANK (USPTO)

Polypepti

Human PRO
Human PRO
Human vas
Human vas
Human vEG
Human VEG
Human Zve
Novel hum
Human Zve
Novel hum
Human PRO
Novel hum
Human PRO

Abb50980
Abb40995
Abb40994
Abb70994
Abb70994
Abb70994
Abb81331
Abb81331
Abb72434
Abb72434
Abb7274
Abb7277
Abb86712

Novel Human Human

Human

```
Platelet-derived growth factor C; PDGF-C; cell proliferation; growth factor; heparin; connective tissue; wound healing; VEGF-F; fibroblast mitogenesis; PDGF alpha receptor activation; tumour growth; choriocarcinoma; Wilms tumour; megakaryoblastic leukaemia; lung carcinoma; erythroleukemia; tissue remodelling.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel DNA encoding PDGF-C useful to stimulate or enhance proliferation, differentiation, growth and motility of cells expressing the PDGF-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amino acid sequence of platelet-derived growth factor C (PDGF-C)
                                                                                                                                                                                                                                                                                                                       ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lee X, Ponten A,
Betsholz C;
                                       AAE00997
AAB7989
AAB47889
AAB47889
AAU76684
AB017758
AB07244
AB072774
AB072774
AB087132
AB087132
AB087132
AB087132
AB087132
AB089793
AB089793
AB089793
               AAB50980
AAB49895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LUDWIG INST CANCER RES.
UNIV HELSINKI LICENSING LTD.
                                                                                                                                                                                                                                                                                                                                                                                              Ź
                                                                                                                                                                                                                                                                                                                                                                                           AAY84557 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0102461P.
98US-0108109P.
98US-0110749P.
98US-0113002P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US022668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0144022P
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
Aase K,
Heldin C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-292954/25.
 N-PSDB; AAA12523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200018212-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-DEC-1998;
21-MAY-1999;
15-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eriksson U,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-NOV-1998;
03-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oestman A,
AAY84557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (LUDW-) 1
(UYHE-) 1
                                                                                                                                                                                                                                                                                                                                                                 RESULT 1
                                                                                                                                                                                                                                                                                                                                                                               AAY84557
Human pla
Human vas
Human vas
Human VEG
Human PRO
Human PRO
Human VEG
Human VEG
Human VEG
Human VBG
Human VEG
Human VEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gro
zve
TAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            morp
                                                                                              9; Search time 118.5 Seconds (without alignments) 1126.011 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aay84557 Amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bone
                                                                                                                                                                                    1 MSLFGLLLVTSALAGQRRGT.....DVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aac13212
Adv311425
Adv31023
Adv33023
Adv33679
Adv10631
Adv10631
Adv10631
Adv10635
Adv1064
Adv1064
Adv24412
Adv24412
Adv24412
Adv24412
Adv2649
                                                                                                                                                                                                                                                                                          2105692
            5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters
                                                                                                                                                                                                                                                           2105692 segs, 386760381 residues
            version 5
                                                                                               3, 2005, 19:08:39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                              Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                    sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB33414
AAB19578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB10651
AAB10633
AAB10650
AAB10644
AAB44322
AAB44122
AAB44122
AAB4858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB01419
AAB24250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY30023
AAY33679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY84557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAE13212
                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
            GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                     geneseqp19808:*
geneseqp20008:*
geneseqp20018:*
geneseqp20018:*
geneseqp2003a8:*
geneseqp2003a8:*
                                                                                                                                                                                                                                                                                                                                                                                                                         Geneseq 16Dec04:*
                                                                    protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                    length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                          US-09-818-943-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyright
                                                                                                 September
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \begin{array}{c} 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.000\\ 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      .........
                                                                                                                                                                                                                                                                                                                                                                Post-processing:
```

sed

Minimum DB Maximum DB

Database

Perfect score:

Sequence:

protein

δ

Run on:

Scoring table:

Searched:

The present sequence represents human platelet-derived growth factor C (PDGF-C) (formally designated VEGF-F). PDGF-C polypeptides have the

Claim 27; Fig 2; 135pp; English.

receptor

pla LP8 PRO

Нишап Human Human Human

ang VEG zve

Human Human

AAB53074 AAB74028 AAG65603

AAE02649

Result Š.

T X

×

Alitalo

Uutela M,

Thu Sep

```
(LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                      Best Local Sim
Matches 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADR31425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADR31425
    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
ability to stimulate and enhance proliferation or differentiation, and/or growth or motility of cells expressing a PDGF-C receptor. PDGF-C polypeptides can be used in pharmaceuticals for promoting cell proliferation, preferably in combination with one other growth factor and heparin. Pharmaceuticals comprising PDGF-C polypeptides can also be used for stimulating connective tissue or wound healing. The PDGF-C polypeptide can be enzymatically processed to generate the active truncated form of PDGF-C and used to regulate the receptor-binding oplypeptide can be enzymatically processed to generate the active truncated form of PDGF-C and used to regulate the receptor activation. Specificity of PDGF-C. PDGF-C an also be used to promote fibroblast mitogenesis in a mammal and to induce PDGF alpha receptor activation. PDGF-C antagonists can be used to inhibit tumour growth of a tumour expressing PDGF-C in a mammal. Specific types of human tumours, e.g. corridorational and erythroleukemia, can be identified by testing for expression of PDGF-C antagonists can also be used to inhibit tissue remodelling during invasion of tumour cells into a normal population of cells. Antagonists can also be used to treat fibrotic conditions, especially conditions, tends in the lung, kidney or liver
                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLIGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK
                                                                                                                                                                                                                                                                                                                                                        1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                             PRFPHTYPRNTVLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; transgenic animal; platelet derived growth factor C; PDGF-C; cardiac hypertrophy; fibrosis.
                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                  Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VIKKYHEVLQLRPKIGVRGLHKSLIDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human platelet-derived growth factor (PDGF-C) protein
                                                                                                                                                                                                                                                                                               100.0%; Score 1858; DB 3;
100.0%; Pred. No. 6.2e-179;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAE13212 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-MAR-2001; 2001WO-US009855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-MAR-2000; 2000US-0192507P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                               Query Match 100.
Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                      Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200172132-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAE13212;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
AAE1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
    ઠે
                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                             è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
The patent discloses a method for producing a transgenic, non-human animal over-expressing a platelet derived growth factor ( PDGF-C), or its functional fragment or analogue. The method involves introducing a transgenic PDGF-C DNA into a cell of a non-human animal, introducing the cell into a non-human animal and allowing the cell to develop into a transgenic, non-human animal. The transgenic animal is useful as a model to study disease states characterised by over-expression of PDGF-C and to find therapy for those diseases, particularly hypertrophy and fibrosis in various organs including the heart. The present sequence is PDGF-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                          A transgenic animal over-expressing platelet derived growth factor C is useful to study and find therapy for disease associated with PDGF-C over-expression, including cardiac hypertrophy and fibrosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSLFGLLLVTSALAGQRRGTQAESNLSSKRGFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSLFGLLLVTSALAGORRGTOAESNLSSKFOFSSNKEQNGVODPOHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LPLDLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEGF; vascular endothelial growth factor; PDGF;
platelet derived growth factor; gene therapy; myelosuppression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human platelet derived growth factor C (PDGF-C) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 1858; DB 5;
100.0%; Pred. No. 6.2e-179;
tive 0; Mismatches 0;
Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
23. .159
/note = CUB domain of PDGF-C
I
Ponten A, Aase K,
                                                                                                                                                                                                                                    Disclosure; Page 40-42; 48pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADR31425 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                         WPI; 2002-010700/01.
Eriksson U, Li X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein from human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ischaemia; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
```

Domain

```
Human; PRO; EST; expressed sequence tag; PCR primer; hybridisation; probe; blood coagulation disorder; cancer; cellular adhesion disorder; secreted protein; transmembrane protein.
                                                       Human PRO200 protein sequence.
                                                                                                                                                                                                                                                       98US-0077450P.
98US-0077632P.
98US-0077641P.
98US-007761P.
98US-007804P.
98US-007803P.
98US-007803P.
98US-007803P.
98US-0079664P.
98US-0079664P.
98US-0079664P.
98US-0079664P.
98US-007922P.
98US-007923P.
98US-007923P.
98US-008033P.
98US-008182P.
98US-008183P.
98US-008189P.
98US-008183P.
98US-008189P.
98US-008189P.
98US-008189P.
98US-008189P.
98US-008189P.
98US-008189P.
98US-00838P.
                                                                                                                                                                                                                                99WO-US005028
                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                    20-MAR-1998;
25-MAR-1998;
26-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                            27-MAR-1998
27-MAR-1998
27-MAR-1998
27-MAR-1998
30-MAR-1998
31-MAR-1998
31-MAR-1998
31-MAR-1998
31-MAR-1998
31-MAR-1998
                                                                                                                                                                       WO9946281-A2
                                                                                                                                                                                                                                                                                                                                                             20-MAR-1998;
20-MAR-1998;
20-MAR-1998;
                            07-DEC-1999
                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                             08-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-APR-1998;
29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-1998
                                                                                                                                                                                                  16-SEP-1999
 AAY41766;
 The present invention relates to a method of stimulating stem cell recruitment, proliferation, or differentiation to stimulate myelopoiesis by vascular endothelial growth factor B (VEGF-B) product or platelet derived growth factor (PDGP) therapy. The invention is useful in gene therapy and for treating myelosuppression and ischaemia. The invention is also useful for manufacturing a medicament for mobilizing endothelial progenitor cells to the peripheral blood in a mammalian subject. The present sequence is human platelet derived growth factor C (PDGF-C) protein. This sequence is used to illustrate the method of invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LTERVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                 Stimulating stem cell recruitment, proliferation, or differentiation to stimulate myelopoiesis by vascular endothelial growth factor B or platelet derived growth factor therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MSLFGLLLUTSALAGORRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GRWCGSGTVPGKQISKGNQIRIRFVSDEYPPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 1858; DB 8; Length 345; Best Local Similarity 100.0%; Pred. No. 6.2e-179; Matches 345; Conservative 0; Mismatches 0; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                             Alitalo K, Eriksson U, Carmeliet P, Li X, Collen
Yla-Herttuala S, Salven P, Rajantie R;
                                                                                                                                                                                   (LICN ) LICENTIA LTD.
(UYFL-) FLANDERS INTERUNIVERSITY INST BIOTECHNOL.
164. .345
/note = Minimal domain
                                                                                                                                                                                                                                                                                                                                                                          Claim 51; SEQ ID NO 7; 151pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY41766 standard; protein; 345 AA
                                                                                                                                                                    LUDW-) LUDWIG INST CANCER RES
                                                                                               04-FEB-2004; 2004WO-US003316.
                                                                                                                          04-FEB-2003; 2003US-0445021P.
16-MAY-2003; 2003US-0471412P.
                                                                                                                                                                                                                                                                      WPI; 2004-604438/58.
N-PSDB; ADR31424.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 345 AA;
                                        WO2004070018-A2
                                                                    19-AUG-2004
```

241

301 301

AAY41766 ID AAY4 XX

61 61

ઠે 셤 ઠે 셤 ò 쉽 ò 셤 ઠ 셤 ò

240

```
241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the VEGF-R protein
                                                                                                    LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A vascular endothelial growth factor related protein and related polynucleotide, useful for identifying antagonists and binding compounds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence represents a vascular endothelial growth factor related (VBGF-R) protein. VBGF-R can be used in assays to identify compounds that bind to or that antagonize its activity. VBGF-R antagonists (e.g. anti-VBGF-R antibodies) are useful for inhibiting tissue growth. This is useful for inhibiting tumour growth and for treating cancer. VBGF-R itself can be used to stimulate tissue growth, angiogenesis and to treat coronary artery blockage. The VBGF-R coding sequence can be used for the recombinant production of the VBGF-R prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSIFGLILITSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                           LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                            LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                           Vascular endothelial growth factor related protein; VEGF-R protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .;
0
                                                                                                                                                                                                                                                                                                                                                                                       tissue growth inhibition; tumour growth; cancer; tissue growth; angiogenesis; coronary artery blockage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 345;
                                                                                                                                                                            VIKKYHEVLOLRPKIGVRGLHKSLIDVALEHHEECDCVCRGSIGG 345
                                                                                                                                                                                                                                                                                                                                               Human vascular endothelial growth factor related protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                          VTKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1851; DB 2;
Pred. No. 3.1e-178;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 56-58; 62pp; English.
                                                                                                                                                                                                                                                             Ź
                                                                                                                                                                                                                                                             AAY30023 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0072635P.
98US-0088089P.
98US-0090544P.
98US-0098548P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US001574
                                                                                                                                                                                                                                                                                                                   11-OCT-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Song HY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    & CO ELI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-458680/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAX86352.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ELIL ) LILLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Na S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9937671-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sest Local Simi
Matches 343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-JUN-1998
                                                                                                                                                           301
                                                                                                                                                                                                                                                                                        AAY30023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            н
                                                                        181
                                            181
                                                                                                      241
                                                                                                                                                                                        301
                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dou S,
                                                                                                                                                                                                                                 RESULT 5
                                                                                                                                                                                                                                                AAY30023
                                                                                                                               d
                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                          ò
                                                                     a
                                                                                                   à
                                                                                                                                                           ò
                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes secreted and transmembrane polypeptides and their polymucleotides. The nucleotide sequences are useful as sources of probes, primers, for chromosome mapping, and for generation of antisense sequences. They can also be used to create transgenic animals. The proteins can be used to treat a variety of diseases and disorders, depending on their function. Diseases that may be treated include blood coagulation disorders, cancers and cellular adhesion disorders. They may also be used to raise antibodies. AA231891 to AA231318, and AAY41685 to AAY41774 represent polynucleotide and polypeptide sequence given in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PRFPHTYPRNIVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEVEFBGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New secreted and transmembrane polypeptides and their polynucleotides, useful for treating blood coagulation disorders, cancers and cellular adhesion disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSLFGLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1851; DB 2;
Pred. No. 3.1e-178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yuan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 12; Fig 207; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ą
 98US-0083559P

98US-0084414P

98US-0084414P

98US-0084431P

98US-0084600P

98US-0084637P

98US-0084643P

98US-0084643P

98US-0084643P

98US-0084643P

98US-0085339P

98US-0085539P

98US-0085689P

98US-008553P

98US-008539P

98US-008533P

98US-008533P

98US-008531P

98US-008531P

98US-008541P

98US-0085689P

98US-008541P

98US-0085689P

98US-0085689P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-551358/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAZ34296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 345 AA;
                                                                                                                                                                                                                                                                                        15-MAY-1998;
15-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-SEP-1998;
                                                                                                                                                                                                                                 15-MAY-1998;
                                                                                                                                                                                                                                                            15-MAY-1998;
15-MAY-1998;
                                                                                                                                                                                                                                                                                                                                  18-MAY-1998;
                                                                                                                                                                                                                                                                                                                      15-MAY-1998,
                                                                                                                                                                                                                                                                                                                                                            22-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                    28-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loca
Matches
  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
```

ö

Gaps

9 9

g

121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180

ò

```
This invention describes the isolation of a novel human vascular endothelial cell growth factor—E (VEGF-E) polypeptide which has tranquillizer, vulnery and cardiant activity. VEGF-E can be administered therapeutically, especially by expressing encoding polynucleotides, to treat cardiovascular or endothelial disorders in mammals, especially humans. It is useful in wound repair and tissue generation and regeneration, and may especially be used to treat cardiac hypertrophy It can be combined with a carrier in pharmaceutical compositions, which can be administered to treat disorders as above. VEGF-E can be used to screen for antagonists and agonists, and the antagonists administered to treat angiogenic disorders in mammals (especially humans) e.g. cancer or agerelated macular degeneration. It can be used to generate antibodies,
                                                             120
                                                                                                                              180
                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                            LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                               241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VEGF-E; human; vascular endothelial cell growth factor; wound repair; treatment; cardiovascular disorder; endothelial disorder; therapy; tissue generation, cardiac hypertrophy; cancer; detection; angiogenic disorder; age-related macular degeneration; vascular disease; neovascularization; tumor; gene mapping.
                                         PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEVEEPSDGTIL
                                                                                                                                                                    GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                181 LPLDLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                              GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                          LPLDLLANNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New growth factor polypeptide useful for treating cardiovascular or endothelial disorders, e.g. cardiac hypertrophy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY33679 standard; protein; 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Fig 2; 122pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-00040220.
98US-00184216.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-580306/49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kuo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAZ23691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human VEGF-E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9947677-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ferrara N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                      61
                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY33679;
61
                                                                                                                              121
                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
AAY33679
1D AAY33679
1D AAY33679
1D AAY33679
AAY3679
AAY36
                                                      a
                                                                                                                        ઠે
                                                                                                                                                                           셤
                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
Human; immune related disease; diagnosis; antiinflammatory; cardiant; dermatological; antiarthritic; antirheumatic; immunosuppressive; haemostatic; antiithyroid; antidiabetic; nootropic; neuroprotective; antianaemic; hepatotropic; virucide, antipsoriatic; antiallargic; antiallargic; wantiasthmatic; systemic virucide, artipsoriatic; antiallargic; wantiasthmatic; systemic lupus errythematosus; rheumatoid arthritis; osteoarthritis; spondyloarthropathy; systemic sclerosis; sarcoidosis; diopathic inflammatory myopathy; Sjogran's syndrome; thyroiditis; autoimmune haemolytic anaemia; disbetes mellitus; watoimmune thrombocytopaenia; immune-mediated renal disease; demyelinating disease; hepatobiliary disease; Whipple's disease; inflammatory bowel disease; gluten-sensitive enteropathy; wifflammatory bowel disease; gluten-sensitive enteropathy; wutoimmune disease; transplantation associated disease; manunological disease; transplantation associated disease; graft rejection; graft-versus-host-disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
               useful to detect VEGF-E polypeptide, especially to diagnose cardiovascular, endothelial or angiogenic disorders in mammals (e.g. vascular disease, or neovascularization associated with tumor formation), by contacting the antibody with a tissue sample and detecting formation of an antibody-VEGF-E polypeptide complex. Polymclectides encoding VEGF-E can be used to diagnose cardiovascular and endothelial disorders in mammals, by detecting abnormally high or low VEGF-E gene expression in tissue samples. They can also be used to diagnose a disease or succeptibility to a disease related to a mutated form of VEGF-E (e.g. a cardiovascular, endothelial or angiogenic disorder such as a tumor), by detecting a mutation in the VEGF-E-encoding sequence isolated from a sample. They may also be used to produce probes useful to detect related sequences or for gene mapping. This sequence represents the human VEGF-E protein described in the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
useful therapeutically as antagonists, as above. The antibodies are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PRFPHTYPRNITVLVWRLVAVEENVWIQLIFDERFGLEDPEDDICKYDFVEVEREPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRFPHTYPRNTVLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVERPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LTEEVRLYSCTPRNFSVSIREELKRTDT1FWPGCLLVKRCGGNCACCLHNCNECQCVPSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                         Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            345
                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                     Score 1851; DB 2;
Pred. No. 3.1e-178;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human PRO200 protein UNQ174 SEQ ID NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB33414 standard; protein; 345 AA.
                                                                                                                                                                                                                                                                                                                                                                                   99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JAN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 99.4 Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                               Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB33414
  $$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
```

Homo sapiens

us-09-818-943-1.rag

```
(first entry)
                                                                                                             Best Local Similarity 99.4
Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55. .59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=
                                                                                   Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                    22-JAN-2001
                                                                                                                                                                                                                                                      181
                                                                                                                                          H
                                                                                                                                                                                                                                                                                                                                                                                                                 AAB19578;
                                                                                                                                                                              61
                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                               301
                                                                                                   Query Match
                                                                                                                                                                                                61
                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein
                                                                                                                                                                                                                                                                                                                                                                                       AAB19578
                                                                                                                                                                                                                                                                                                                                                                             RESULT
8888888888
                                                                                                                                                        q
                                                                                                                                                                                               g
                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                          ઠે
                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes sixty four human PRO proteins which can be used in the treatment of immune related diseases. The human PRO proteins, anti-PRO antibodies, agonists and antagonists are useful for treating and diagnosing immune related disorders. The disorders are selected from systemic lupus erythematosus, rheumatoid arthritis, selected from systemic arthritis, spondyloarthropathies, systemic solerosis, idiopathic inflammatory myopathies, Sjogren's syndrome, systemic vasculitis, sarcoidosis, autoimmune haemolytic anamania, autoimmune thrombocytopaenia, thyroiditis, diabetes mellitus, immune-mediated renal diseases, demyelinating diseases of the central and peripheral nervous systems, hepatobiliary diseases, inflammatory bowel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sixty four PRO polypeptides, useful in the diagnosis and treatment of immune related disorders, e.g. systemic lupus erythematosis, rheumatoid arthritis, osteoarthritis, thyroiditis and diabetes mellitus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Henzel V
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney AL, Hebert C,
D, Shelton DL, Smith
Wood WI, Yan M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               P, Goddard A,
an J, Pennica I
Watanabe CK, V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 33; Fig 2; 309pp; English
                                                                                                                                                                                                                                                                                                                                                                           2000WO-US000277.
2000WO-US00376.
2000WO-US003565.
2000WO-US004341.
                                                                                                                                                                                                                                                                                 99WO-US028409.
99WO-US028301.
99WO-US028634.
                                                              99WO-US005028.
99US-0123618P.
99US-0123957P.
99US-0125775P.
                                                                                                           99WO-US008615.
99US-0131445P.
99US-0132371P.
99US-0134287P.
                                                                                                                                                 99WO-US012252.
99US-0141037P.
99US-0144758P.
                                                                                                                                                                                                                                   99WO-US021547.
99WO-US023089.
99US-0162506P.
                                                                                                                                                                                      99US-0146222P.
                                                                                                                                                                                                                                                                                                                                                 99WO-US030999.
99WO-US031274.
2000WO-US000219.
                                                                                                                                                                                                                  99WO-US020944.
                                                                                                                                                                                                                                                                                                                       99WO-US028564
                                                                                                                                                                                                                                                                                                                                                                                                                  18-FEB-2000; 2000WO-US004342.
22-FEB-2000; 2000WO-US004414.
                                              2000WO-US005841
                                                                                                                                                                                                         99WO-US020594
                                                                                                                                                                                                                                                              99WO-US028214
99WO-US028313
                                                                                                                                                                                                                                                                                                            99WO-US028551
                                                                                                                                                                                                                                                                                                                                          99WO-US030095
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker KP,
11 Y. Pan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lu Y, Pa
Tumas D,
                                                                                                                                                                                                                                                                                                                                                                                                                                              (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-572271/53.
N-PSDB; AAC58579.
        WO200053758-A2
                                                                                                                                                                                                                                                                                                                                                                          06-JAN-2000; 2
06-JAN-2000; 2
11-FEB-2000; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ashkenazi AJ,
Kabakoff RC,
                                              02-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                  20-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                           30-DEC-1999;
                                                                                                                                                                                                                                                                         30-NOV-1999;
                                                                                                                                                                                                                                                                                  30-NOV-1999;
                                                                                                                                                                                               01-SEP-1999
                                                                                                                                                                                                                                                                                                                                          16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stewart TA,
                           14-SEP-2000
\mathbf{x}
```

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 LIEBVRLYSCTPRNFSVSIREELKRTDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRO200; vascular epithelial growth factor B; VEGF-E; human; ocular disease; retinopathy; maculopathy; therapy; retinitis pigmentosa; macular degeneration; retinal detachment; retinal tear; macular hole; myopia; traumatic chorioretinopathy; acute retinal necrosis syndrome; contusion; edema; retinal vision occlusion; vascular disease; retinal vasculitis; thrombocytopenic purpura; uveitis; retinal occlusion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
disease, gluten-sensitive enteropathy and Whipple's disease, autoimmune or immune-mediated skin diseases, allergic diseases, immunological diseases of the lung, and transplantation associated diseases including graft rejection and graft versus-host-disease. AAC58397 to AAC58578 represent PCR primers and hybridisation probes used in the isolation of human PRO sequences. AAC58679 to AAC586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSLFGLLLTTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQISKGNQIRIRRFVSDEYFPSEPGFCHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAUSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LPLDLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLIGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSLFGLLLVTSALAGORRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                              represent human PRO polynucleotide and protein sequences given in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human PRO200 (vascular endothelial growth factor E).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.6%; Score 1851; DB 3;
99.4%; Pred. No. 3.1e-178;
iive 2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Asn is N-glycosylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note= "Asn is N-glycosylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "N-myristoylation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      117. .123
/note= "N-myristoylation"
127. .133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .. .14
|label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15. .345
/label= Mature_Pro200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB19578 standard; protein; 345
```

```
121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-442669/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xu J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200037641-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-DEC-1998;
18-MAR-1999;
08-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sordon RD,
                                                                                                                                                      301
                                                                                                                                                                                                                                                                                           AAB10651;
                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dhanaraj
                                                                                                                                                                                                                               RESULT 9
                                                                                                                     g
                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                 유
                              δ
                                                                                        ઠે
                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is that of human PRO200 or vascular endothelial

CG growth factor E (VEGF-E), as predicted from a cDNA clone (see AAA88515)

CC drowth factor E (VEGF-E), as predicted from a cDNA clone (see AAA88515)

CC drows isolated from a gliona cell library using probes (see

AAA88523-26) based on an expressed sequence tag (see AAA88522) that

CG AAA88523-26) based on an expressed sequence tag (see AAA88522) that

CG showed homology to VEGF. PRO200 has a predicted mol.wt. of 39,029 and a

CG polyceptides in coll ransformed with a vector comprising a PRO

CR nucleic acid is claimed. The invention relates to the use of PRO

CR nucleic acid is claimed. The invention relates to the use of PRO

CR nucleic acid is claimed. The invention relates to the use of PRO

CR nucleic acid is claimed. The invention relates to the use of PRO

CR nucleic acid is claimed. The invention relates to the use of PRO

CR nucleic acid is claimed. The invention relates to the use of PRO

CR nucleic acid is claimed. The invention relates of displaced amacrine cells,

CR clis and pigment epithelial cells from injury and degradation. The cretinal cells are preferably photoreceptors and photoreceptors cell injury

CR death is caused by retinal injury, light or environmental trauma or by an ocular disease selected from retinitis pigmentosa, macular

CR degeneration, including age-related, retinal detachment, retinal tears,

CR myopia, acute retinal necrosis syndrome, traumatic chorioretinopathies or

CR myopia, acute retinal necrosis syndrome, traumatic chorioretinopathies or

CR myopia, acute retinal or branch retinal vision occlusion such as central or branch retinal vision occlusion as central or branch retinal vision occlusion as central or branch retinal vision occlusion as central or branch selected from the selected from retinal vertices and systemic lupus erythematosus

CR diseases, thrombocycopenic purpura, uveitis, retinal verticular and encourage and systemic lupus erythematosus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEBESDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRFPHTYPRNTVLVWARLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEFSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                              Novel PRO polypeptides useful for preventing or rescuing retinal cells from injury caused by ocular diseases such as retinitis pigmentosa, retinopathy, retinal degenerative diseases, degenerative myopia, uveitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                       Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99.6%; Score 1851; DB 3; Length 345; 99.4%; Pred. No. 3.1e-178; ive 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                       Henzel WJ;
La Fleur M,
                              "Asn is N-glycosylated"
                                                                                                                                                                                                                                                                                                       Hebert C,
            254. 258

/note= "Asn is N-glycosylat

281. 287

/note= "N-myristoylation"

282. 288
                                                                                        /note= "N-myristoylation"
319. .325
 "N-myristoylation"
                                                                                                                                                                                                                                                                                                       Gurney AL, He
Kljavin IJ,
                                                                                                                      /note= "Amidation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 2; Fig 2; 140pp; English.
                                                                                                                                                                                                             10-MAR-2000; 2000WO-US006319.
                                                                                                                                                                                                                                             99US-0123957P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 343; Conservative
                                                                                                                                                                                                                                                                                                      Goddard A,
, Klein RD,
   /note=
                                                                                                                                                                                                                                                                         (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-587437/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAA88515.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 345 AA;
                                                                                                                                                    WO200053760-A2
               Modified-site
                                            Modified-site
                                                                          Modified-site
                                                                                                      Modified-site
                                                                                                                                                                                                                                                                                                      Ferrara N, G
Kabakoff RC,
                                                                                                                                                                                                                                             12-MAR-1999;
                                                                                                                                                                                 14-SEP-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
This invention describes a novel vascular endothelial growth factor-X (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has valentary, cytostatic, antitheumatic, antithritatic, antipaoriatic and antidiabetic activity and acts as an angiogenesis and vascularization regulator. An antisense molecule of the invention is useful for treating or preventing cancer, rhewastold arthritis, psoriasis and diabetic retinopathy by inhibiting angiogenic activity or inappropriate vascularization including formation and proliferation of new blood vessels, growth and development of tissues tissue regeneration and organ in itsue repair in a subject. The products of the invention are useful for preparing medicaments for treating wounds such as dermal ulcers, pressure sores, venous sores, diabetic ulcers and burns and to promote skin graft growth, tissue repair, proliferation of new blood vessels, tissue regeneration and organ repair by promoting angiogenic activity or vascularization. This sequence repersesnts the human VEGF-X protein
                                                                                                                                  300
                                                                                                                                                                                     241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VEGF-X; vascular endothelial growth factor; human; vulnerary; cytostatic; antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment; angiogenesis regulator; vascularization regulator; cancer; psoriasis; rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair; tissue reganeration; tissue repair; wound; dermal ulcer; pressure sore; venous sore; diabetic ulcer; burns; skin graft growth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New vascular endothelial growth factor protein, useful for treating or preventing diseases associated with inappropriate angiogenesis activity such as cancer, rheumatoid arthritis, psoriasis and wounds.
241 LTEBVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gosiewska A;
                                                                                                                                                                                                                                                                                                                                                                      301 VIKKYHEVLQLRPKTGVRGLHKSLIDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                   VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yon JR, Dijkmans JJH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB10651 standard; protein; 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 72; Fig 12; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98GB-00028377.
99US-0124967P.
99US-0164131P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US030503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JAN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sprengel JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (JANC ) JANSSEN PHARM NV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human VEGF-X protein #3.
```

```
Disclosure; Fig 6; 127pp; English.
                                                                                                                                                                                        Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200037641-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ното варіепв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB10650;
                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB10650
 8X55555555555555555555888
                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X D X B X S X M M M M X B X D X Y X Y X D
                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                    Š
                                                 ö
                                                                                                                                                                    180
                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                   VEGF-X; vascular endothelial growth factor; human; vulnerary; cytostatic; antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment; anglogenesis regulator; vascularization regulator; cancer; psoriasis; rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair; tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore; venous sore; diabetic ulcer; burns; skin graft growth.
                                                                                                           PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                   LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                          LIEEVRLYSCTPRNPSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                     69
                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New vascular endothelial growth factor protein, useful for treating or preventing diseases associated with inappropriate angiogenesis activity such as cancer, rheumatoid arthritis, psoriasis and wounds.
                                                                                                                                                            GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                      PRFPHTYPRNTVLVWRLVAVEENVWIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                   1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                        LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                 Gaps
                                                 .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gosiewska A;
                            Length 345;
                                                                                                                                                                                                                                                                                VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dijkmans JJH,
                            99.6%; Score 1851; DB 3; 99.4%; Pred. No. 3.1e-178; ive 2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                    Human RACE generated VEGF-X protein.
                                                                                                                                                                                                                                                                                                                                         Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 You JR,
                                                                                                                                                                                                                                                                                                                                        AAB10633 standard, protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0124967P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98GB-00028377.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US030503
                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sprengel JJ,
                                               Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (JANC ) JANSSEN PHARM NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000-442669/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xu J;
                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAA71951
         Sequence 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200037641-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dhanaraj SN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-MAR-1999;
08-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                19-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gordon RD,
                                                                                                           61
                                                                                                                            61
                                                                                                                                                 121
                                                                                                                                                                    121
                                                                                                                                                                                        181
                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                            AAB10633;
                             Query Match
                                                                                                                                                                                                                                                                                                                     RESULT 1
XX SS
                                                                                     셤
                                                                                                         ò
                                                                                                                           g
                                                                                                                                                à
                                                                                                                                                                a
                                                                                                                                                                                    õ
                                                                                                                                                                                                        g
                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                     ò
```

```
vulnerary, cytostatic, antirheumatic, antiarthritic, antipsoriatic and antidiabetic activity and acts as an angiogenesis and vascularization regulator. An antisense molecule of the invention is useful for treating or preventing cancer, rheumatoid arthritis, psoriasis and diabetic retinopathy by inhibiting angiogenic activity or inappropriate vascularization including formation and proliferation of new blood vessels, growth and development of tissues regeneration and organ and tissue repair in a subject. The products of the invention are useful for preparing medicaments for treating wounds such as dermal ulcers, pressure sores, venous sores, diabetic ulcers and burns and to promote skin graft growth, tissue repair, proliferation of new blood vessels, tissue regeneration and organ repair by promoting angiogenic activity or vascularization. This sequence represents the RACE generated human VEGF-X protein described in the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEGF-X; vascular endothelial growth factor; human; vulnerary; cytostatic; antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment; angiogeneeis regulator; vascularization regulator; cancer; psoriasis; rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair; tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore; venous sore; diabetic ulcer; burns; skin graft growth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GRWCGSGTVPGKOISKGNOIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
This invention describes a novel vascular endothelial growth factor-X (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1851; DB 3; Length 345;
Pred. No. 3.1e-178;
2; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB10650 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vuery match
Best Local Similarity 99.4%;
Matches 343; Conservative 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JAN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human 990126vegx protein.
```

```
19-JAN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
  д,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                This invention describes a novel vascular endothelial growth factor-X (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has valientary, oyfostatic, antitheumatic, antiathritic, antipaoritatic and antidiabetic activity and acts as a nagiogenesis and vascularization regulator. An antisense molecule of the invention is useful for treating or preventing cancer, rheumatoid arthritis, psoriasis and diabetic retinopathy by inhibiting angiogenic activity or inappropriate vascularization including formation and proliferation of new blood vessels, growth and development of tissues of the invention are useful or preparing medicaments for treating wounds such as dermal ulcers, pressure sores, venous sores, diabetic ulcers and burns and to promote skin graft growth, tissue repair, proliferation of new blood vessels, tissue regeneration and organ repair proliferation of new blood vessels, tissue regeneration and organ repair by promoting angiogenic activity or vascularization. This sequence reparesents the human 990126vegx protein used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LTEEVRLYSCTPRNFSVSIREELKRIDTIEWPGCLLVKRCGGUCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LIEBVRLYSCIPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                 preventing diseases associated with inappropriate angiogenesis activity such as cancer, rheumatoid arthritis, psoriasis and wounds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MSLFGLLLITSALAGOROCTOAESNLSSKFOFSSNKEONGVODPOHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSBPGFCIHYNIVWPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                    New vascular endothelial growth factor protein, useful for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                Gosiewska A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                Dijkmans JJH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99.6%; Score 1851; DB 3; 99.4%; Pred. No. 3.1e-178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Mismatches
                                                                                                                                                                                                                                       Disclosure; Fig 11; 127pp; English.
                                                                                                              Yon JR,
                          98GB-00028377.
99US-0124967P.
99US-0164131P.
 99WO-US030503
                                                                                                              Sprengel JJ,
Xu J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 99.4
Matches 343; Conservative
                                                                                 (JANC ) JANSSEN PHARM NV.
                                                                                                                                                        WPI; 2000-442669/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 345 AA;
 21-DEC-1999;
                                                                                                                            Dhanaraj SN,
                                          18-MAR-1999;
                                                     08-NOV-1999;
                            22-DEC-1998
                                                                                                              Gordon RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
```

ઠે 셤 ઠ 원 ઠે 셤 ઠે ď ò 셤 ઠે Ź

AAB10635 standard; protein; 345

AAB10635;

```
This invention describes a novel vascular endothelial growth factor-X (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has vulnerary, cytostatic, antitheumatic, antiparitic, antiporiatic and antidabetic activity and acts as a nangiogenesis and vascularization regulator. An antisense molecule of the invention is useful for treating concer, rheumatoid arthritis, psoriasis and diabetic retinopathy by inhibiting angiogenic activity or inappropriate vascularization including formation and proliferation of new blood vessels, growth and development of tissues, tissue regeneration and organ and tissue repair in a subject. The products of the invention are useful for preparing medicaments for treating wounds such as dermal ulcers, pressure sores, venous sores, diabetic ulcers and burns and to promote skin graft growth, tissue repair, proliferation of new blood vessels, tissue regeneration and organ repair, proliferation of new blood vessels, tissue regeneration and organ repair by promoting angiogenic activity or vascularization. This sequence represents the human VEGF-X protein sequence represents the human VEGF-X protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                VEGF-X; vascular endothelial growth factor; human; vulnerary; cytostatic; antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment; angiogeneais regulator; vascularization regulator; cancer; psoriasis; rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair; tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore; venous sore; diabetic ulcer; burns; skin graft growth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New vascular endothelial growth factor protein, useful for treating or preventing diseases associated with inappropriate angiogenesis activity such as cancer, rheumatoid arthritis, psoriasis and wounds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRFPHTYPRNTVLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVBEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSLFGLLLTSALAGOROGTOAESNLSSKFOFSSNKEONGVODPOHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTBAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.6%; Score 1851; DB 3; Length 345; 99.4%; Pred. No. 3.1e-178; ive 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gosiewska
VEGF-X protein #1 isolated from clones 4 and 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dijkmans JJH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yon JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Fig 9; 127pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98GB-00028377.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0124967P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US030503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sprengel JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (JANC ) JANSSEN PHARM NV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-442669/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Χu J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAA71955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                  WO200037641-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-DEC-1998;
18-MAR-1999;
08-NOV-1999;
                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dhanaraj SN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gordon RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

us-09-818-943-1.rag

ö

Gaps

ö

9 9 120 120 180 180 240 240

181 241 241 301 301

> 셤 ò g

ò

AAB10644;

AAB10644

```
LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                            241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                          1 MSLFGLLLTSALAGGRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                               PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                   PRFPHTYPRNTVLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                               GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                      181 LPLDLLNNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL
                                                                                                 MSLPGLLLVTSALAGORRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human, secreted protein, transmembrane protein, PRO, EST, cytostatic, expressed sequence tag, detection, cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eaton DL;
                      Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human PRO200 (UNQ174) protein sequence SEQ ID NO:488.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ashkenazi AJ, Baker KP, Botstein D, Desnoyers L,
                                                                 ö
                      Score 1851; DB 3;
Pred. No. 3.1e-178;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB44322 standard; protein; 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0145698P.
99US-0162506P.
99WO-US028313.
99WO-US028551.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0123957P.
99US-0126773P.
99US-0130232P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0131445P.
99US-0134287P.
99US-0141037P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US031274.
2000WO-US000219.
2000WO-US000277.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US028565.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-FEB-2000; 2000WO-US004341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US031243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US000376
                        99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-FEB-2001 (first entry)
                    Query Match
Best Local Similarity 99.4'
Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200053756-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-SEP-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                            121
                                                                                                     Н
                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB44322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB44322
                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                     ઠે
                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This invention describes a novel vascular endothelial growth factor-X
(VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has
vulnerary, cytostatic, antitheumatic, antistrhitic, antisporatatic and
antidiabetic activity and acts as an angiogenesis and vascularization
regulator. An antisense molecule of the invention is useful for treating
or preventing cancer, rheumatoid arthritis, psoriasis and diabetic
retinopathy by inhibiting angiogenic activity or inappropriate
vascularization including formation and proliferation of new blood
vessels, growth, and development of tissues, tissue regeneration and organ
and tissue repair in a subject. The products of the invention are useful
cor preparing medicaments for treating wounds such as dermal ulcres,
pressure sores, venous sores, diabetic ulcers and burns and to promote
skin graft growth, tissue repair, proliferation of new blood vessels,
tissue regeneration and organ repair proliferation of new blood vessels,
vascularization. This sequence repaires a human VEGF-X protein
certification of the invention
                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                   VEGF-X; vascular endothelial growth factor; human, vulnerary; cytostatic; antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment; angiogenesis regulator; vascularization regulator; cancer; psoriasis; rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair; tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore; venous sore; diabetic ulcer; burns; skin graft growth.
                                                                                   New vascular endothelial growth factor protein, useful for treating or preventing diseases associated with inappropriate angiogenesis activity such as cancer, rheumatoid arthritis, psoriasis and wounds.
LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dijkmans JJH, Gosiewska A;
                                                                                                                                          VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                   VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Fig 30B; 127pp; English
                                                                                                                                                                                                                                                                               AAB10644 standard; protein; 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yon JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0124967P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US030503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98GB-00028377
                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sprengel JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (JANC ) JANSSEN PHARM NV.
                                                                                                                                                                                                                                                                                                                                                                                               Human VEGF-X protein #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-442669/38.
N-PSDB; AAA71990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xu J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200037641-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dhanaraj SN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ношо варіепв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-MAR-1999;
08-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                          19-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-JUN-2000
```

Gordon

WO200032221-A2.

08-JUN-2000

```
ö
                                                                                                                                                                                                                                       AAC78458 to AAC78599 represent polynucleotide and EST (expressed sequence tag) sequences which encode secreted or transmembrane PRO polypeptides. The PRO polynucleotides and polypeptides have cytostatic activity. The polynucleotides and polypeptides can be used for detecting the presence of PRO polypeptides in samples, for linking bioactive molecules to cells and for modulating biological activities of cells, using the polypeptides for specific targeting. The polypeptide targeting can be used to kill the target cells, e.g. for the treatment of cancers. The polypeptide pairs provide specific targeting of bioactive molecules to cells. AAC78600 to AAC78878 represent PCR primers and probes used in the isolation of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRFPHTYPRNTVLVWRLVAVEBNVWIQLTFDBRFGLEDPEDDICKYDFVEVEBESDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; PRO; promotion; inhibition; angiogenesis; cardiovascularisation; diagnosis; trauma; wound; cancer; atherosclerosis; cardiac hypertrophy; angiogenic; proliferative; cardiant; cardiovascular; antiatherosclerotic; cytostatic; gene therapy; vaccine.
                                                 Ľ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                   t
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
, Gerber H, Gerrac.
Gurney AL, Hillan KJ;
NF. Roy MA, Shelton DI
                                                                                                                                              Novel PRO polypeptides and polynucleotides used in detection methods, ttarget bioactive molecules to specific cells, and to modulate cellular activities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEVEBPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRWCGSGTVPGKQISKGNQIRIRRFVSDBYFPSBPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.6%; Score 1851; DB 3; Length 345; 99.4%; Pred. No. 3.1e-178; ive 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                Gurney AL, F
, Paoni NF,
               Filvaroff E, Fong S, Gao W, Ger
Godoweki PJ, Grinaldi CJ, Gwrney
Kwo SS, Napier MA, Pan J, Paor
Tumas D, Williams PM, Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human PRO713 protein sequence SEQ ID NO:137.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB24412 standard; protein; 345 AA
                                                                                                                                                                                                             Claim 12; Fig 207; 636pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 99.4
Matches 343; Conservative
                                                                                                2000-611443/58
                                                                                                               N-PSDB; AAC78582
                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                      Goddard A,
                                                               Stewart TA,
                  Ferrara N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB24412;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽<u>`</u>,&
                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
useful for preventing, disguishing and treating disguishing a cardiovascular, endothelial or angiogenic disorder in mammals by modulating cell proliferation, angiogenesis and cardiovascularisation, and for identifying agonists and antagonists of these processes. The nucleic acids and the proteins they encode may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate PRO expression such as cardiovascular, endothelial or angiogenic disorders in mammals (e.g. atherosclerosis, cancers and cardiac hypertrophy). For polypeptide may be used to treat disorders associated with decreased PRO polypeptide may be used to treat disorders associated with decreased PRO expression. AAA77510 to AAA7721 and AAB24388 to AAB24435 represent nucleotide and protein sequences used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nucleic acids encoding PRO polypeptides useful for preventing, diagnosing and treating diagnosing a cardiovascular, endothelial or angiogenic disorders in mammals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PRFPHTYPRNITVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEBESDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGIVVPGKQISKGNQIRIRFVSDEYPPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               present invention describes nucleic acids encoding PRO polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSLFGLLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                        Hillan KJ;
Kuo SS, Paoni NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.6%; Score 1851; DB 3; 99.4%; Pred. No. 3.1e-178; ive 2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                        Gerber H,
Klein RD,
Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                        Baker KP, Ferrara N,
dowski PJ, Gurney AL,
nabe CK, Williams PM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 72; Fig 50; 315pp; English.
                                                                                                                                       99WO-US005028
99US-01314287
99US-01314287
99WO-US012252
99WO-US01252
99US-0144758P
99US-0145698
99WS-0145698
99WO-US0202011
                                                                                                               98US-0112850P.
99US-0115554P.
                                                                                                                                                                                                                                                                                     99WO-US020944
                                                                     99WO-US028313
                                                                                                                                                                                                                                                                                                      99WO-US021090
                                                                                                                                                                                                                                                                                                                    99WO-US021547
                                                                                                                                                                                                                                                                                                                                   99WO-US023089
                                                                                                                                                                                                                                                                                                                                                99US-0162506P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              Goddard A, Godunger, V. Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                           Ashkenazi AJ, Baker
Godowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-412154/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAA77621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 345 AA;
                                                                                                                                                        12-MAR-1999;
28-APR-1999;
14-MAY-1999;
                                                                     30-NOV-1999;
                                                                                                                                                                                                  02-JUN-1999;
                                                                                                                                                                                                                                                                        08-SEP-1999
                                                                                                                                          08-MAR-1999
                                                                                                                                                                                                                               20-JUL-1999
                                                                                                                                                                                                                                             26-JUL-1999
                                                                                                                                                                                                                                                             01-SEP-1999
                                                                                                                                                                                                                                                                                                      15-SEP-1999
                                                                                                                                                                                                                                                                                                                     15-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
```

```
Oy 181 LPLDLLNNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL 240

181 LPLDLLNNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL 240

181 LPLDLLNNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL 240

OY 241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWFGCLLVKRCGGNCACCLHNCNECQCVPSK 300

241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWFGCLLVKRCGGNCACCLHNCNECQCVPSK 300

OY 301 VTKKYHEVLQLRFKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345

Db 301 VTKKYHEVLQLRFKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345

Search completed: September 3, 2005, 19:25:47

Job time: 122.5 secs
```

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

model
8
using
search,
protein
1
protein
Ö

September 3, 2005, 19:17:40; Search time 25.5 Seconds (without alignments) 1301.756 Million cell updates/sec Run on:

US-09-818-943-1 1858 1 MSLFGLLLVTSALAGQRRGT......DVALEHHEECDCVCRGSTGG 345 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 seqs, 96216763 residues Searched:

283416 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	spinal cord-derive	platelet-derived g	spinal cord-derive	intrinsic factor-B	procollagen C-endo	A5 antigen precurs	procollagen C-endo	intrinsic factor-B	procollagen C-endo	procollagen C-endo	procollagen C-endo	procollagen I C-pr	ď	Ra-reactive factor	tolloid-BMP-1 like	metalloproteinase	complement subcomp		polyprotein - Afri	brain-specific CUB	hensin - rabbit	vascular endotheli	Ď,	procollagen I C-pr	_	hypothetical prote	platelet-derived g	hyaluronate-bindin	membrane-type friz
	3 ID	JC7591	: JC7998	3C7592	: T09456	. BMHU1	JQ0948	: JC2218		A58788				A39288	A59271		S71352					: T30549	: S69207	-	TH0403		: T22812	350735	: A41735	: JC7629
	Length DB	370 2	370 2			730 1				823 1			449 2	1057	686 1		597 2			1524 2					402 2		3871 2	98	277 2	
* Ouery	Match Length	40.0	39.7	٩.	•	9.8	•	٠	٠	9.3	9.1	9.1	8.3	8.0	٠	7.5	7.5	7.4	7.4	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.9	6.7	9.9	9.9
	Score	742.5	737.5	736	183	181.5	179.5	176	176	173	169	169	154	148.5	143.5	139.5	138.5	m	137.5	137.5	135	133	132	130.5	128	127.5	127.5	125	123.5	123.5
Result	No.	н	7	e	4	S	ø	7	80	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	53

335 CDCVC 339

ò

platelet-derived g	tumor necrosis tac	TSG-6 homolog PS4	16K vascular endot	platelet-derived g	platelet-derived g	platelet-derived g	platelet-derived g	UVS.2 protein - Af	sanko - human	platelet-derived g	platelet-derived g	PDGF-related trans	platelet-derived g	vascular endotheli	platelet-derived g
TVCTSS	306506	A47290	D49530	PFHUG2	151551	S08220	151550	151569	A59386	JN0248	825096	TVMVSS	A37359	A41551	B28964
 (N	N	N	н	~	N	N	~	N	~	N	7	7	~	N
245	275	276	148	241	200	215	226	319	2403	166	197	226	196	232	196
6.5	6.5	6.4	6.2	6.2	6.1	6.1	6.1	6.0	5.9	5.9	5.9	5.8	5. 8	5.6	5.6
120.5	120.5	118.5	114.5	114.5	112.5	112.5	112.5	111.5	110.5	110	109	108.5	108	104.5	104
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

RESULT 1 JC7591 spinal cord-derived growth factor-B precursor - human C;Species: Homo sapiens (man) C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 09-Jul-2004 C;Accession: JC7591 K;Hamada, T.: Jul-Tei, K.; Imaki, J.; Miyata, Y. Biochem. Biophys. Res. Commun. 280, 733-737, 2001 A;Title: Molecular cloning of SCDGF-B, a novel growth factor homologous to SCDGF/PDGF-C/A;Recence number: JC7591; MUID:21092670; PMID:11162582 A;Recession: JC7591 A;Rolecule type: DNA A;Residues: L370 <4MA> A;Residues: L370 <4MA> A;Residues: L370 <4MA> A;Residues: L370 <4MA> A;Residues: CGGF-B F;11-17/Domain: secretory signal sequence #status predicted <sig>F;18-370/Product: spinal cord-derived growth factor-B #status predicted <mat> F;22-170/Region: CUB domain #status predicted F;22-170/Region: CUB domain #status predicted F;22-170/Region: CUB domain #status predicted Guery Match Best Local Similarity 43.6%; Score 742.5; DB 2; Length 370; Match Match Conserved motif #status predicted Match Match Conserved No. 5.7e-56; Match M</mat></sig>	QY 3 LFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQD-PQHERIITVSTNGSI 58 	QY 59 HSPREPHTYPRNTVLVWRLVAVEENVMIQL/FDERFGLEDPEDDICKXDFVEVEEBSDGT 118 Db 65 QSPRFPNSYPRNLLLTWRLHS-QENTRIQL/FDNQFGLEEAENDICRYDFVEVEUDISETS 123 QY 119ILGRWCGSGTVPGRQISKGNQIRIRFVSDBYFPSEBGFCIHYNIVMPQFTEAV 171 Db 124 TIIRGRWCGHKEVPPRIKSRTNQIKITFKSDDYFVAKFGFKIYYSL-LEDFQPAAASETN 182	OY 172SPSVLPPSALPLDLIANNAITAFSTLEDLIRYLEPERWQLDLEDLYR 217 Db 183 WESVTSSISGVSYNSFSVTDPT-LIADALDKKIAEFDTVEDLLKYFNPESWQEDLENMYL 241 OY 218 PTWQLLGKAFVFGRKSRVVDLNLTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLV 277 Db 242 DTRYKGRSY-HSRKSK-VDLDRLNDDAKRYSCTPRNYSVNIREELKLANVVFFPRCLLV 299 OY 278 KRCGCLHNCNECQCVPSKVTKYTHVLQLRPKTGVRGLHKSLTDVALEHHEB 334	THE SACE CONTRACTOR OF THE SECURIOR SEC
--	---	--	--	--

```
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1063 ----NFPNN-----
                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: T09456
                  Query Match
Best Local Simil
Matches 149; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     338
                                                                                                                                                                                                                                                                                                                                161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     256
                                                                                                                                                       42
                                                                                                                                                                                                                                                                                         154
                                                                                                                                                                                                96
                                                                                                                                                  ద
                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                             ઠ
                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                          ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                à
                                                                                                 District derived growth factor-D - mouse

C;Species: Mus musculus (house mouse)
C;Date: 10.Nov-2003 #sequence_revision 10-Nov-2003 #text_change 24-Nov-2003
C;Accession: JC7998
B;Zhuo, Y.; Hoyle, G.W.; Zhang, J.; Morris, G.; Lasky, J.A.
Biochem. Biophys. Res. Commun. 308, 126-132, 2003
A;Title: A novel murine PDGP-D splicing variant results in significant differences in pe A;Reference number: JC7998
B;Molecule type: mRNA
A;Reference number: JC7998
B;Molecule type: mRNA
A;Residues: 1-370 < 2HU>
C;Comment: This protein is a potent mesenchymal cell mitogen and chemoattractant involve C;Genetics:
A;Genetics:
A;Gene: pdgf-D
A;Introns: 42/2; 110/1; 170/2; 191/2; 258/2; 330/1; 334/2
C;Keywords: fibrosis; PDGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C:Species: Rattus norvegicus (Norway rat)
C:Species: Rattus norvegicus (Norway rat)
C:Species: Rattus norvegicus (Norway rat)
C:Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 09-Jul-2004
C;Accession: 407592
R:Hamada, T: Ui-Tei, K.; Imaki, U.; Miyata, Y.
Biochem. Biophys Res. Commun. 280, 733-77, 2001
A;Title: Molecular Cloning of SCDGF-B, a novel growth factor homologous to SCDGF/PDGF-C/A;Contents: Fetal brain
A;Accession: 407592
A;Molecule type: mRNA
A;Residues: 1-370 c4HAN
A;Cross-references: UNIPROT:Q9EQTI; DDBJ:AB052170
C;Genetics:
A;Gene: scodgf-B
F;1-17/Domain: secretory signal sequence #status predicted cSIG>
F;1-17/Domain: secretory signal cord-derived growth factor-B #status predicted
F;1-370/Region: CUB domain #status predicted
F;272-370/Region: Cub admin #status predicted
F;294-308/Region: conserved motif #status predicted
F;294-308/Region: conserved motif #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                grow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCDGF/PDGF-C/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGT--ILGRWCGSGTVPGK 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSR 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VVDLNLLTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNEC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200 ITDPT-LTADALDKTVAEFDTVEDLLKHFNPVSWQDDLENLYLDTPHYRGRSY-HDRKSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    258 -VDLDRLNDDVKRYSCTPRNHSVNLREELKLTNAVFFPRCLLVQRCGGNCGCGTVNWKSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QRRGTQAESNLSSKFQFSSNKEQNGVQD-PQHERIITVSTNGSIHSPRFPHTYPRNTVLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAV-------SPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QCVPSKVTKKYHEVLQLRP---KTGVRGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCSSGKTVKKYHEVLKFEPGHFKRRGKAKNMALVDIQLDHHERCDCIC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2; Length 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 39.7%; Score 737.5; DB 2; Length: Best Local Similarity 44.0%; Pred. No. 1.5e-55; Matches 153; Conservative 59; Mismatches 103; Indels
CDCIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                295
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
R;Kozyraki, R.; Kristiansen, M.; Silahtaroglu, A.; Hansen, C.; Jacobsen, C.; Tommerup, N
Blood 91, 3593-3600, 1998
A;Title: The human intrinsic factor-vitamin B12 receptor, cubilin: Molecular characteriz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-3623 <KOZ>
A;Residues: 1-3623 <KOZ>
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----YPNNW----ECIYRITVRİGÖLIAVHFTNFSLEEAI 1099
                                                                                                                                                                                                                                                                                                          195
                                                                                                                                                                                                                                                                                                                                                          219
                                                                                                                                                                                                                                                                                                                                                                                                             255
                                                                                                                                                                                                                                  277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SVSIRBELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSKVTKKYHEVLQLRP-- 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ESNHLTDLYRRDENIRVTGTGHVQSPRFPNSYPRNLLLTWRLHS-QEKTRIQLAFDHQFG 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65
                                                                                                     95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Homo sapiens (man)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 09-Jul-2004
C;Accession: T09456
                                                                                                                                                                                                        LEDPEDDICKYDFVEVEEPSDGT--1LGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                        ---SPSVLPPSALPLDLLNNAITAFST
                                                                                                                                                                                                                                                                                                                                     196 LEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNLLTEEVRLYSCTPRNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 GTQAESNLSSKFQF-----SSNKEQNG-----VQDPQHERIITVSTNGSIHSPRFPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66 TYPRNTVLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVEPSDGTILGRWCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          126 SGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIV-----MPQFTEAVSPSVLPPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180 ALPLDLINNAITARSTLEDLIRYLEPERWOLDLEDLYR---PTWOLLGKAFVFGRKSRVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Map position: 10p12
C;Superfamily: intrinsic factor-B12 receptor cubilin; EGF homology
C;Superfamily: intrinsic factor-B12 uptake
F;1-24/Domain: signal sequence #status predicted <SIG>F;25-3623/Product: intrinsic factor-B12 receptor #status predicted <MAT>F;436-467/Domain: EGF homology <EGF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90;
                                                     28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Score 183; DB 2; Length 3623;
; Pred. No. 1.1e-06;
42; Mismatches 139; Indels 9
                                                93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                intrinsic factor-B12 receptor Cubilin precursor - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: Z16677; MUID: 98241400; PMID: 9572993
39.6%; Score 736; DB 2;
45.6%; Pred. No. 2.1e-55;
cive 57; Mismatches 93
                                                                                                                                                                                                                                                                                                          PGFCIHYNIV---MPQFTEAV-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314 -KTGVRGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 26.2%;
```

Ξ

```
Neuron 7, 295-307, 1991.

A;Title: The A5 antigen, a candidate for the neuronal recognition molecule, has homologi A;Reference number: JH0466; MUID:91337458; PMID:1908252

A;Accession: JH0466
                                                                                                                                                                                                                          A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: MRNA
A Molecule type: MRNA
A Molecule type:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N; Alternate names: bone morphogenic protein 1
C; Species: Xenopus laevis (African clawed frog)
C; Date: 30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change 09-Jul-2004
C; Accession: JC2218
R; Maeno, M.; Xue, Y.; Wood, T.I.; Ong, R.C.; Kung, H.
R; Maeno, M.; Xue, Y.; Wood, T.I.; Ong, R.C.; Kung, H.
A; Title: Cloning and expression of cDNA encoding Xenopus laevis bone morphogenetic prote
A; Reference number: JC2218; MUID:94085787; PMID:8262384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-707 cMAE.
A; Residues: 1-707 cMAE.
A; Residues: 1-707 cMAE.
A; Residues: 1-707 cMAE.
A; Cross-references: UNIPROT: P98070; GB:L12249; NID:g406540; PIDN:AAA16313.1; PID:g406541
C; Comment: This procell induces ectopic cartilage formation in vivo.
C; Superfamily: procollagen C-endopeptidase; actacin homology; CIr/CIS repeat homology cir/Cis repeat
F; 285-394/Domain: actacin homology cAST>
F; 285-394/Domain: CIr/CIS repeat homology cCIR1>
F; 285-394/Domain: CIr/CIS repeat homology cCIR2>
F; 398-507/Domain: EGF homology cEGF>
F; 545-550/Domain: EGF homology cEGF>
F; 554-666/Region: complement 1r/1s-like repeat
F; 554-660/Domain: CIr/CIS repeat homology cCIR3>
F; 554-666/Region: complement 1r/1s-like repeat
F; 554-660/Domain: GIF/CIS repeat homology cCIR3>
F; 554-660/Modified site: Zinc (His, His, His, Tyr) #status predicted
F; 177, Active site: GIU #status predicted
F; 177, Active site: GIU #status predicted
F; 528/Modified site: erythro-beta-hydroxyasparagine (Asn) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;646-812/Domain: MAM homology <MAM>
F;861-883/Domain: transmembrane #status predicted <TWM>
F;150,261,300,523,844/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88 EVIDGDNANGOLLGKYCGK-IAPSPLVSTGPSIFIRRVSDYETPG-AGFSIRYEVFKTGP 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               procollagen C-endopeptidase (EC 3.4.24.19) - African clawed frog (clone 22AN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EV--EEPSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYPPSEPGFCIHYNIVMP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ITVSTNGSIHSPRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146 ECSRNFTSSNGVIKSPKYPEKYPNALECTYIIFAPKMQEIV--LEFESFELEAD 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----QFTEA---VSPSVLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWQLDLE 213
Takagi, S.; Hirata, T.; Agata, K.; Mochii, M.; Eguchi, G.; Fujisawa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 707;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 176; DB 2;
Pred. No. 5.9e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.7%; Score 179.5; DB 1
31.6%; Pred. No. 4.1e-07;
7ative 29; Mismatches 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N'ALTETRATE ABMGE'S DONE MORPDOGGNIC PROCESS 1 (18874)
C'Species: Homo sapiens (man)
C'Species: Homo sapiens (man)
C'DACCESSION: A37278; Bacquence_revision 03-Aug-1995 #text_change 18-Jun-1999
C'ACCESSION: A37278; Bacquence_revision 03-Aug-1995 #text_change 18-Jun-1999
R'MOZDROY, J.M.; Rosen, V.; Celeste, A.J.; Mitsock, L.M.; Whitters, M.J.; Kriz, R.W.; Hew Science 242, 1528-1534, 1988
A-Title: Novel regulators of bone formation: molecular clones and activities.
A;Reference number: A37278; MUD:89072730; PMID:3201241
A;Reference number: A37278; MUD:89072730; PMID:3201241
A;Residues: 1-730 <MCZ.
A;Cross-references: GB:M22488; NID:g179499; PIDN:AA51833.1; PID:g179500
C;Genetics:
A;Genetics:
A;Gen
                                                                                                                              1100 G-NYYTDFLEIRDGGYEKSPLLGIFYGSNLPPTIISHSNKLWLKFKSDQIDTRSGFSAYW 1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                             ---LTTSSGTFISPNYPMPXYHSSECYWWLKSSHG-SAFELEFKDFH 1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 653
                                                                                                                                                                                                                          PGCLLVKRCGGNCACCLHNCNECOCVPSKVTKKYHE - - - VLQLRPKTGVRGLHKSLTDVA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NGSIHSPRFPHTYPRNTVLVWRLVA-VEENVWIQLTFDERFGLEDPEDDICKYDFVEVEE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              114 --PSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAV 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                procollagen C-endopeptidase (EC 3.4.24.19) precursor, splice form BMP1 - hum NyAlternate names: bone morphogenic protein 1 (BMP1) C;Species: Homo sapiens (man) C;Species: Homo sapiens (man) C;Date: 16-Sep-1992 #sequence_revision 03-Aug-1995 #text_change 18-Jun-1999 C;Accession: A37278; ES8788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A5 antigen precursor - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 10-Sep.1999 #sequence_revision 10-Sep-1999 #text_change 16-Jun-2000
C;Accession: JH0466; JQ0948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           654 GLTADSKLHGKFCGS-EKPEVITSQYNNMRVEFKSDNTV-SKKGFKAHF-----FSEK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; Length 730;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9.8%; Score 181.5; DB 1 larity 37.3%; Pred. No. 2.1e-07; Conservative 20; Mismatches 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPSVLPPSALPLDL 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              705 RPALQPPRGRPHQL 718
                                                                                                                                                                                                                                                                                                                 1159 DGS--STGCGGN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1212 LEHHPNC 1218
                                                                                                                                                                                                                                                                                                                                                                                                         329 LEHHEEC 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
nes 50; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S:
Matches 50
                                      237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22
                                                                                                                                                                                                                                                                                                   ద
                                                                                                                    g
                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

165

R.W.; Hew

```
A; Molecule type: mRNA
A; Residues: 1-702, 'EKRPALQPPRGRPHQLKFRVQKRNRTPQ' <WOZ>
A; Cross-references: GB: M22488; NID:g179499; PIDN:AA51833.1; PID:g179500
A; Cross-references: GB: M22488; NID:g179499; PIDN:AA51833.1; PID:g179500
J: Takahara, K:, Lyons, G. E., Greenspan, D.S.
J: Biol. Chem. 269, 32572-32578, 1994
A; Title: Bone morphogenetic protein-1 and a mammalian tolloid homologue (mIld) are encod A; Reference number: A58788; MUID:95096114; PMID:7798260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Molecule type: mRNA
A,Residues: 1-702,'EKRPALQPPRGRPHQLKFRVQXRNRTPQ' <WOZ>
A,Cross-references: UNIPROT:P13497, GB:M22488; NID:g179499; PIDN:AAA51833.1; PID:g179500
R,Takahara, K.; Lyons, G.E.; Greenspan, D.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  procollagen C-endopeptidase (EC 3.4.24.19) precursor, tolloid-like splice form N;Alternate names: bone morphogenic protein 1, tolloid-like splice form C;Species: Homo sapiens (man)
C;Date: 28-Mar-1998 #sequence_revision 09-Apr-1998 #text_change 09-Jul-2004
C;Accession: 337279; B58788
R;Wozney, J.M.; Rosen, V.; Celeste, A.J.; Mitsock, L.M.; Whitters, M.J.; Kriz, Science 242, 1528-1534, 1988
                                                                              Celeste, A.J.; Mitsock, L.M.; Whitters, M.J.; Kriz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NGSIHSPRFPHTYPRNTVLVWRLVA-VEENVWIQLTFDERFGLEDPEDDICKYDFVEVEE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114 --PSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAV 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    654 GLTADSKLHGKPCGS-EKPEVITSQYNNMRVEFKSDNTV-SKKGFKAHFFSVLEGAGDRH 711
C;Date: 28-Mar-1998 #sequence_revision 09-Apr-1998 #text_change 18-Jun-1999 C;Accession: A37278; A58788 R;Wozney, J.M.; Rosen, V.; Celeste, A.J.; Mitsock, L.M.; Whitters, M.J.; Kriz Science 242, 1528-1534, 1988 A;Title: Novel regulators of bone formation: molecular clones and activities. A;Teference number: A37278; MUID:89072730; PMID:3201241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        activities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Reference number: A37278; MUID:89072730; PMID:3201241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F;214/Active site: Glu #status predicted
F;565/Modified site: erythro-beta-hydroxyasparagine (Asn) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.3%; Score 173; DB 1;
35.6%; Pred. No. 1.3e-06;
ative 19; Mismatches 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S-----PSVL-----PPSAL 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SHLSGLELLLCPHALVDTVPAPPSAL 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: A58788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cispecies: Rattus norvegicus (Norway rat)
Cispecies: Rattus norvegicus (Norway rat)
Cispecies: Rattus norvegicus (Norway rat)
Cispecies: Rattus norvegicus (Norway rat)
Cispecies: Rattus norvegicus (Norway rat)
Cispecies: Rattus norvegicus (Norway rat)
Cispecies: Rattus (Rattus rattus ratt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peripheral membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C.Superfamily: intrinsic factor-Bl2 receptor cubilin; EGF homology
C;Keywords: egg yolk; endocytosis; glycoprotein; intestine; kidney; peripheral mc
F)-120/Domain: signal sequence #status predicted <SIG>
F;21-3623/Product: intrinsic factor-Bl2 receptor CUBILIN #status predicted <MAT>
F;133-164/Domain: EGF homology <EGF>
F;436-467/Domain: EGF homology <EGF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1059 LSSPNFPNNYPSNWECIYRITVGLNQIALHFTDF-TLEDYFGSQCVDFVE-----IR 1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1157 ---YWDGS--STGCGCN----LTTPTGVLTSPNYPMPYYHSSECYWRLEASHG-SPFELE 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24;
                 5
                                                                                                                                                   617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  174 SVLP--PSALPLDL-----LNNAI----TAFSTLED-----LIRYLEPERWQLDLE 213
                                                                                  55 NGSIHSPRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEE- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901 SVYNILYVTFVKSSSMENRGFTA-----KFSSDKLECG------EVLTAST-GIIE 944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFSDGTI 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                267 DTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSKVTKKYHE---VLQLRPKTGVRGLHKS 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    procollagen C-endopeptidase (EC 3.4.24.19) precursor, splice form HIS - human N;Alternate names: bone morphogenic protein splice form BMP-1/His C;Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                            intrinsic factor-B12 receptor CUBILIN precursor - rat
C.Species: Rattus norvegicus (Norway rat)
C.Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          214 DLYRPTWQLLGKAFVFGRKSRVVDLNLLTEEVRLY-----SCTPRNFSVSIREELKRT
                                                                                                                                                562 NGSINSPGWPKEYPPNKNCIWQLVAPTQ-YRISLKFDQ---PETEGNDVCKYDFVEVRSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 SLFGLLLVT--SALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHY-----NIVMPQFTEAVSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92; Gaps
             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 9.5%; Score 176; DB 2; Length 3623; Best Local Similarity 25.5%; Pred. No. 4.5e-06; Matches 95; Conservative 52; Mismatches 133; Indels 9:
                                                                                                                                                                                                                                                       618 LTSDSKLHGKFCGS-ELPAVITSQYNNMRIEFKSDNTV-SKKGF 659
                                                                                                                                                                                                                 114 -PSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGF 156
                 Indels
                 36;
                 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             207 FODFHLEHHPSC 1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  324 LTDVALEHHEEC 335
                 Conservative
                 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gene: CUBILIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A58788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                            셤
                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

7;

R.W.; Hew

human

S

```
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A, Molecule type: mRNA
                                                             22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genetics:
                                                             ò
                                                                                                                          셤
                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 procollagen C-endopeptidase (EC 3.4.24.19) precursor, tolloid-like splice form - mouse C; Species: Mus musculus (house mouse)
C; Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C; Accession: 149540
B; Fukagawa, M.; Noboru, S.; Hogan, B.L.M.; Jones, C.M.
Dav. Biol. 163, 175-183, 1994
A; Title: Embryonic expression of mouse bone morphogenetic protein-l (BMP-l) which is rell A; Reference number: 149540; MUID:94229342; PMID:817472
A; Reference number: 149540; MUID:94229342; PMID:8174772
A; Residues: 1-991 «REs>
A; Residues: 1-991 «REs>
A; Residues: 1-991 «REs>
A; Residues: 1-991 «REs>
A; Coss references: UNIPROT:P98063; GB:L24755; NID:g439606; PIDN:AAA37306.1; PID:g439607
C; Genetics:
A; Gene: Bmp-l
C; Superfamily: procollagen C-endopeptidase; astacin homology; CIr/CIs repeat homology; E
C; Keywords: hydrolase; metalloproteinase; zinc
F; 135-326/Domain: BGF homology «EG1»
F; 556-592/Domain: BGF homology «EG1»
F; 556-592/Domain: BGF homology «EG1»
F; 1318-322, 228, 2777/Binding site: zinc (His, His, His, Tyr) #status predicted
F; 219/Active site: Glu #status predicted
                                                                                                                          A. Accession: BS8788
A. Molecule type: mRNA
A. Gross-references: GB:L35279; NID:g619860; PIDN:AAC41710.1; PID:g619861
C. Genetics:
A. Genetics: GB:BMF1; BMP-1
A. Genetics: GB:BMF1; BMP-1
A. Gross-references: GB:L35203; OMIM:112264
A. Genetics: GB:BMF1; BMP-1
A. Gross-references: GB:BMF1; BMP-1
A. Gross-references: GB:L35203; OMIM:112264
A. Molecular type: GB:L35203; OMIM:112264
A. Molecular type: A. Molecular type: GB:L35203; OMIM:112264
A. Molecular type: A. Molecular type: GB:L35203; OMIM:112264
C. Molecular type: A. Molecular type: GB:L35203; OMIM:112264
C. Molecular type: A. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91,142,332,363,599/Binding site: carbohydrate (Asn) (covalent) #status predicted
163-319,185-205,322-348,375-397,435-461,488-510,551-563,559-572,574-587,591-617,644-66
1213,217,223,272/Binding site: zinc (His, His, His, Tyr) #status predicted
                                                                 encoc
. Biol. Chem. 269, 32572-32578, 1994
Title: Bone morphogenetic protein-1 and a mammalian tolloid homologue (mTld) are
Reference number: A58788; MUID:95096114; PMID:7798260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P;214/Active site: Glu #status predicted
F;565,720/Modified site: erythro-beta-hydroxyasparagine (Asn) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55 NGSIHSPRFPHTYPRNTVLVWRLVA-VEENVWIQLTFDERFGLEDPEDDICKYDFVEVEE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             114 -- PSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHY 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ch 9.1%; Score 169; DB 2; Length 99: 1 Similarity 39.4%; Pred. No. 3.6e-06; 43; Conservative 17; Mismatches 39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
9.1%; Score 169; DB 1;
Best Local Similarity 39.4%; Pred. No. 3.6e-06;
Matches 43; Conservative 17; Mismatches 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130-321/Domain: astacin homology <AST>
7322-431/Domain: CIr/Cls repeat homology <CIRL>
743-544/Domain: CIr/Cls repeat homology <CIRL>
755-547/Domain: EGF homology <EGI>
7591-700/Domain: EGF homology <EGI>
770-742/Domain: EGF homology <EGI>
770-742/Domain: EGF homology <EGI>
770-742/Domain: CIr/Cls repeat homology <CIRS>
770-7856/Domain: CIr/Cls repeat homology <CIRS>
770-973/Domain: CIr/Cls repeat homology <CIRS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 43; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

```
Cispecies: Howo mapiens (man)
Cispecies: Ge-Feb-1995 #sequence_revision 06-Feb-1995 #text_change 15-Mar-2004
Cistacession: A55362
Ritakahara, K.; Kessler, E.; Biniaminov, L.; Brusel, M.; Eddy, R.L.; Jani-Sait, S.; Show
T. Blol. Chem. 269, 262892, 1994
A;Title: Type I procollagen COOH-terminal proteinase enhancer protein: identification, p
A;Reference number: A55362; MUID:95014462; PMID:7523404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: FlyBase:tld
A;Cross-references: FlyBase:FBgn0003719
C;Superfamily: dorsal-ventral patterning protein tolloid; astacin homology; Clr/Cls repe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Residues: 1-1057 <SHI>
A;Cross-references: UNIFROT:P25723; GB:M76976; NID:9157305; PIDN:AAA28491.1; PID:9157306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           melanoga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Species: Drosophila melanogaster
C;Species: Drosophila melanogaster
C;Accession: A39289 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: A39288
R;Shimell, M.J.; Ferguson, E.L.; Childs, S.R.; O'Connor, M.B.
Cell 67, 469-481, 1991
A;Title: The Drosophila dorsal-ventral patterning gene tolloid is related to human bone A;Reference number: A39288; MUID:92034970; PMID:1840509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dorsal-ventral patterning protein tolloid (EC 3.4.24.-) - fruit fly (Drosophila
NGSIHSPRFPHTYPRNTVLVWRLVA-VEENVWIQLTFDERFGLEDPEDDICKYDFVEVEE 113
                                         111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         224 AVSDDSRRLGKFCGD-AVPGSISSEGNELLVQFVSDLSVTAD-GFSASYK-TLPRGTAKE 280
                                                                                                                                                                                                                                                                                                                                                                                                                          procollagen I C-proteinase enhancer protein precursor - human
C;Species: Homo sapiens (man)
C;Date: 06-Feb-1995 #sequence_revision 06-Feb-1995 #text_change 15-Mar-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56 GSIHSPRFPHT-YPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                112 EEPSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: mRNA
A;Residues: 1-449 «TAK>
A;Cross-references: GB:L33799; NID:g642907; PIDN:AAA61949.1; PID:g642908
C;Genetics:
A;Gene: GDB:PCOLCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aymap position: 7421.3-7422

C,Keywords: extracellular protein; glycoprotein; pyroglutamic acid

E;1-25/Domain: signal sequence #status predicted <8IG>

E;2-49/Product: #status predicted <MAT>

E;37-146/Domain: CIr/Cls repeat homology <CIR1>

F;159-27/Domain: CIr/Cls repeat homology <CIR1>

F;25/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) :

F;29,431/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22;
                                                                                                                                                                                                     659 GLTADSKLHGKFCGS-EKPEVITSQYNNMRVEFKSDNTV-SKKGFKAHF 705
                                                                                                                                                   114 -- PSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHY 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 449;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 8.3%; Score 154; DB 2; Best Local Similarity 33.8%; Pred. No. 2.6e-05; Matches 48; Conservative 22; Mismatches 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Status: not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Cross-references: GDB:305468; OMIM:600270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            169 -----EAVSPSV-LPPSALP 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  281 GOGPGPKRGTEPKVKLPPKSQP 302
```

φ

```
250 TDREEHGPFCGK-TLPHRIETKSNTVTITFVTDE-SGDHTGWKIHY 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 21.9%
Matches 70; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Search completed: September
Job time: 27.5 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AyRaducule type: mRNA
A;Residues: 1-686 ~JEN>
A;Cross-references: UNIPROT:O00187; GB:Y09926; NID:g4007626; PIDN:CAA71059.1; PID:g40076
A;Rote: submitted to GenBank, December 1996
A;Note: parts of this sequence, including the amino end of the mature protein, were dete C;Genetics:
A;Genetics: A;Genetics: GBB:6071500
A;Map position: 1936.2-1936.3
C;Superfamily: complement activating serine proteases Clr/Cls/MASP; Clr/Cls repeat homol C;Keywords: beta-hydroxyasparagine; complement pathway; duplication; hydrolase; serine F;1-15.5Domain: signal sequence #status predicted ~SIG>
F;16-444,445-686/Product: Ra-reactive factor 2 #status predicted ~MAT>
F;19-134/Domain: Clr/Cls repeat homology ~CIR2>
F;184-293/Domain: Clr/Cls repeat homology ~CIR2>
F;300-361/Domain: complement factor H repeat homology <FH1>
F;300-361/Domain: complement factor H repeat homology <FH2>
F;300-361/Domain: complement factor H re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           445-679/Domain: trypsin homology <TRY>
72-90,142-156,152-165,167-180,184-211,241-259,300-348,328-361,366-412,396-430,434-552,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ra-reactive factor (EC 3.4.21.-) 2 precursor - human NyAlternate names: mannose binding protein-associated serine proteinase 2 (MASP-2) (S.Speciase: Homo sapiens (man) (S.Speciase: Homo sapiens (man) (S.Speciase: 19-May-2000 #sequence_revision 19-May-2000 #text_change 09-Jul-2004 (S.Accession: A59271 (May-2000 #text_change 09-Jul-2004 (May-2000 #text_change 09-Jul-2004 (May-2000 #thiel, S.) Vorup-Jensen, T.; Stover, C.M.; Schwaeble, W.J.; Laursen, S.B.; Poulsen, K. Nature 386, 566-510, 1997 (May-2000 #thim mannan-binding lectin that activates A.Reference number: A59271; MUD:97242412; PMID:9087411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A, Status: nucleic acid sequence not shown; not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NGSIHSPRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEP 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50 ITVSTNGSIHSPRFPHTYPRNTVLVMRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFV 109
C; Keywords: duplication, hydrolase; metalloproteinase; zinc
F; 136-322/Domain: astacin homology <AST>
F; 352-464/Domain: Cir/Cis repeat homology <CIR1>
F; 552-464/Domain: Cir/Cis repeat homology <CIR2>
F; 688-620/Domain: Cir/Cis repeat homology <CIR2>
F; 588-620/Domain: Cir/Cis repeat homology <CIR3>
F; 787-782/Domain: Cir/Cis repeat homology <CIR3>
F; 787-896/Domain: Cir/Cis repeat homology <CIR4>
F; 787-896/Domain: Cir/Cis repeat homology <CIR5>
F; 787-896/Domain: Cir/Cis repeat homology <CIR5>
F; 222, 231, 280/Binding site: zinc (His, His, His, Tyr) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;158/Modified site: erythro-beta-hydroxyasparagine (Asn) #status predicted
F;444-445/Cleavage site: Arg-Ile (autolytic) #status predicted
F;483,532,633/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1057,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 686;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHY 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110 EVEE--PSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSD 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 7.7%; Score 143.5; DB 1; Best Local Similarity 32.1%; Pred. No. 0.00035; Matches 34; Conservative 25; Mismatches 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.0%; Score 148.5; DB 1
38.0%; Pred. No. 0.00022;
trive 20; Mismatches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.0%
Best Local Similarity 38.0%
Matches 38; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: A59271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  임
```

```
N'Alternate names: probable metalloprotease TBL-1
C'Species: Aplysia californica (California sea hare)
C'Species: Aplysia californica (California sea hare)
C'Species: 2-Oct-1999 #sequence_revision 22-Oct-1999 #text_change 09-Jul-2004
C'SAccession: T31069
R'Liu, Q.R.; Hattar, S.; Endo, S.; MacPhee, K.; Zhang, H.; Cleary, L.J.; Byrne, J.H.; Es
J. Neurosci. 17, 755-764, 1997
J. Neurosci. 17, 755-764, 1997
A;Reference number: 220965; MUID:98007484; PMID:8987797
A;Reference number: 220965; MUID:9807784; PMID:8987797
                                                                                                                                                                                                                                                                                                                                                                                                                                             A,Residues: 1-1070 <a href="https://doi.org/10.2107">https://doi.org/10.21099041</a>; PID:g1899042; PIDN:AAC474
A,Cross-references: UNIPROT:P91972; EMBL:U57369; NID:g1899041; PID:g1899042; PIDN:AAC474
C,Superfamily: dorsal-ventral patterning protein tolloid; astacin homology; Clr/Cls repe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----NIVMPOFTEAVSPSV 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 176 LPPSALPLDLINNAITAFS----TLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     231 RKSRVVDLNLLTEEVRLYSCTPRNFSVS--IREELKRIDTIFWPGCLL----VKRCGGN 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   742 NKER-----LQGQYCGFWAPPSITSLSNELRIEFRSDDTLQKTGFSMDYVADVDECASS 795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSIHSPRFPHTYPRNTVLVWRLVAVEENVWIQL---TFDERFGLEDPEDDICKYDFVEVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     582 DGDTKDSPLVGTYCGTRT-PPNAISTSRHLYVKFVSDESM-QKGGFSASYLEEVDECEGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        640 DHGCEHVCVNTLGSYECTCKIGYELHSDGKKCEKACGGYLDAPSGTİSSPSF----PDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7.5%; Score 139.5; DB 2; Length 1070; 21.9%; Pred. No. 0.0013; ive 36; Mismatches 102; Indels 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   113 --EPSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYPPSEPGFCIHY--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
tolloid-BMP-1 like protein 1 - California sea hare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3, 2005, 19:30:37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        284 CACCLHNCN-----ECQC 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 796 NGGCKHICENTVGSFHCSC 814
```

```
8 12:11:17 2005
Thu Sep
```

```
September 3, 2005, 19:09:34; Search time 114.5 Seconds (without alignments) 1542.946 Million cell updates/sec
                                                                                                                                                                                              US-09-818-943-1
1858
1 MSLFGLLLVTSALAGQRRGT......DVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                               1612378
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                      1612378 segs, 512079187 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                          OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                            BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                 Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Q9nral homo sapien	Q9ul22 homo sapien		Oscile mus musculu	Q9eqx6 rattus norv		Q9i946 gallus gall		Q9gzp0 homo sapien		Q925i7 mus musculu	Q9eqt1 rattus norv	Q6v9h4 oryctolagus		Q8qfx6 brachydanio	Q69db8 brachydanio		₩.			_	Q6rt22 brachydanio	Q6t870 brachydanio	Q99jm4 mus musculu	P28824 xenopus lae	xenobns	Q91925 xenopus lae	070244 rattus norv	P98068 strongyloce	е шив шивс	057381 xenopus lae
SUMMARIES	ID	Q9NRA1	Q9UL22	Q9QY71	Q8C119	О ЭЕДХ6	Фэлния	Q91946	Q8K429	Q9GZP0	Q9BWV5	092517	Q9EQT1	Q6V9H4	Q8K2L3	NRP1_BRARE	Q69DB8	Q7LC53	060494	057658	Q6T869	Q69DB7	Q6RT22	Q6T870	Q99JM4	NRP1_XENLA	BMP1_XENLA	Q919 <u>2</u> 5	070244	SPAN_STRPU	9млм6	057381
	08	7	~	~	~	~	~	~	~	7	~	~	~	~	7	-	~	~	~	7	~	N	~	N	7	-	-	N	~	٦	~	0
	Length	345	345	345	345	345	345	345	258	370	364	370	370	300	261	923	923	3494	3623	691	871	959	959	959	34	928	707	977	3623	616	1012	735
æ	Query	100.0	9.66	•	89.5	98.6	88.0	86.9		39.9	39.9	39.7	39.6	36.0	23.4	10.3	10.3	9.8	9.8	9.8	9.8	9.8	8.	9.8	9.7	9.7	٠		•	9.3	٠	9.5
	Score	1858	1851	1664	1662	1646	1635	1614	1260	741.5	740.5	737.5	736	669.5	435.5	190.5	190.5	183	183	182	181.5	181.5	181.5	181.5	180	179.5	176	176	176	173.5	172	171
	Result No.	-	8	m	4	2	ø	7	80	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	30	31

ò 중..음

음 &

9 9

1 MSLFGLLIVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS 1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS

a lae apien norv norv sculu sculu sculu sculu sculu sculu sculu spien		0;
xenopus lae homo sapien ratus norv ratus norv mus musculu homo sapien mus musculu mus musculu mus musculu homo sapien homo sapien homo sapien	E Y	Gaps
066ki3 x 09y617 h 09y617 h 09ug0 b 09z135 r 06p53 m 09l2m2 m 08gzy7 m 09h2d5 h 09h2d5 h	eleosto mo. , , , , , , , , , , , , , , , , , , ,	345;
888888118888888888888888888888888888888	9 E 12 E 8 E 9 E	Length Indels
	ALIGNMENTS LIMINARY; PRT; 345 AA. EMBLrel. 15, Created) EMBLrel. 25, Last sequence update) EMBLrel. 25, Last annotation update) EMBLrel. 25, Last annotation update) EMBLrel. 25, Last annotation update) EMBLrel. 25, Last annotation update) Lipubuch factor C. A. Lipubuch factor C. Lipubuch Eactor C. Eldin CH., Alitalo K., Ostman A., Eriks A. Procease-activated ligand for the PDGP 2302-309(2000). Belongs to the PDGF/VEGF growth factor f AAF80597.1; CHAPONTY, IEA. Pregulation of cell cycle; IEA. Pregulation of cell cycle; IEA. Pregulation of cell cycle; IEA. Pregulation of cell cycle; IEA. Pregulation of cell cycle; IEA. Pregulation of cell cycle; IEA. Pregulation NOTO: Pregulation NOTO: Pregulation NOTO: Pregulation NOTO: Pregulation NOTO: PREGULATION PREGULAT	B 2; -150; 0;
	ALIGNMENTS Tated) t sequence update t annotation upd C. raniata; Vertebratarrhin; Homin B2; DOI=10,1038/; Caniata; Vertebratarrhin; Homin Eactor H., Labrass talo H., Labrass ta	Score 1858; DB Pred. No. 3.1e-1 Mismatches
066KI3 09Y6L7 09U00 09U00 09ZI35 06P550 BMPI_HUMAN BMPI_MOUSE 08M2Z7 08M2Z7 09H2E2 09H2E2 09H2E4	ALIGNMENTS PRT; 345; eated) st sequence st annotation. Craniata; V Craniata; V Catarrhini; talo K., O vated ligan litalo K., O vated ligan pred ligan italon; IEA f. Cell cyclu ration; IEA	ore 1858; ed. No. 3. Mismatches
Q66KI3 Q9Y6L7 Q9YQ10 Q9ZI3 Q6P550 BMP1 HT BMP1 HT BMP1 Q6XZI Q8QZY7 Q9H2E2 Q9H2E4 Q9H2E4	LIMINARY; PRT; 345, EMBLrel. 15, Created) EMBLrel. 15, Last sequence EMBLrel. 15, Last sequence Gyowth factor C. dagrowth factor C. landan). Zoa; Chordata; Craniata; V. ria; Primates; Catarrhini; j. i.A. 1; PubMed=10806482; DOI=10 1; PubMed=10806482; DOI=10 1; PubMed=10806482; DOI=10 2:302,309(2000). Belongs to the PDGF/VEGF AMF80597.1; NTO. C. membrane; IEA. F:Growth factor activity; Pregulation of cell cycl. 0072; PD_growth_factor. CUB; 1. PCGF; 1. CUB; 1. PGGF; 1. CUB; 1. PGGF; 1. CUB; 1. PGGF; 1.	
	ARY; el. 15, C; el. 15, Le el. 25, Le el. 25, Le chordata; Primates; Primate	100.0%; 100.0%; ive
735 1015 1018 241 241 775 991 991 901 901 901	PRELIMINARY; (TrEMBLrel. (TrEMBLrel. ived growth (Human). etazoa; Chor theria; Prim 66; M N.A. 8201; Pubmed M N.A. 8201; Pubmed M N.A. 11; Aselongs	vat
。 。 。 。 。 。 。 。 。 。 。 。 。 。	PRELIMINARY 2000 (TrEMBLrel. 2003 (TrEMBLrel. 2003 (TrEMBLrel. 2003 (TrEMBLrel. 2003 (TrEMBLrel. 2003 (TrEMBLrel. 2003 (TrEMBLrel. 2003 (TrEMBLrel. 2004 (TrEMBLrel. 2004 (TrEMBLrel. 2004 (TremBlrel. 2004 (TremBlrel. 2004 (TremBlrel. 2004 (TremBlrel. 2005 (TremBlrel. 2005 (TremBlrel. 2006 (TremBlrel. 2007 (TremBlrel. 2006 (TremBlrel. 2006 (TremBlrel. 2006 (TremBlrel. 2006 (TremBlrel. 2007 (TremBlrel. 2006 (TremBlrel. 2007 (TremBlrel. 2006 (TremBlrel. 2006 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2006 (TremBlrel. 2007 (TremBlrel. 2006 (TremBlrel. 2007 (TremBlrel. 2006 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (TremBlrel. 2007 (Trem	100 Larity 100 Conservative
171 171 171 169 169 169 165.5 165.5 165.5 164.5 164.5		Simi 5;
	1,7 1 1,090RA1 090RA1 090RA1 090RA1 01-0CT-2 01-	Query Match Best Local Matches 34
	SOUR BEST OF THE STANDARD OF T	Query M Best Lo Matches

ö

09UL22

셤

ò 셤

셤 ò

ò

us-09-818-943-1.rup

```
99.6%;
                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 99.41
Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Ovary;
Tsai Y.-J., L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9QY71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
    XXXXXXXXXXXXXXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=21347863; PubMed=11297552; DOI=10.1074/jbc.M101056200; Gilbertson D.G., Duff M.E., West J.W., Kelly J.D., Sheppard P.O., Hofstrand P.D., Gao Z., Shoemaker K., Bukowski T.R., Moore M., Feldhaus A.L., Humes J.M., Palmer T.E., Hart C.E.; "Platelet-derived growth factor C (PGF-C), a novel growth factor that binds to PDGF alpha and beta receptor."; J. Biol. Chem. 276:27406-27414(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \label{eq:median} \begin{tabular}{ll} \hline \mbox{MEDLINE=20317014; pubMed=10858496; DOI=10.1016/S0014-5793(00)01640-9;} \\ \mbox{Hamada T., Ui-Tei K., Miyata Y.;} \\ \mbox{Hamada Exerved from developing spinal cords, SCDGF, is a unique member of the POGF/VEGF family.";} \\ \mbox{FBSS Lett. 475:97-102(2000).} \\ \end{tabular}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003; Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D., Brush J., Clen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd P., Eaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S., Huang A., Kilm H.S., Kilmowski L., Jin Y., Johnson S., Lee J., Eewis L., Liao D., Mark M., Robbie E., Sanchez C., Schoenfeld J., Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A., Vandlen R., Watennabe C., Wieand D., Woods K., Xie M.H., Yansura D., Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I., Godowski P.,
                                                                                          181 LPLDLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                   LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
TISSUB-Uterus;
MEDILINE-20461776; PubMed=11004490; DOI=10.1016/S0167-4781(00)00066-X;
Tsai Y.J., Lee R.K., Lin S.P., Chen Y.H.;
"Identification of a novel platelet-derived growth factor-like gene,
fallotein, in the human reproductive tract.";
Biochim. Biophys. Acta 1492:196-202(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: bioinformatics assessment."; Genome Res. 13:2262270(2003). EMBL; AR01434; AAF000491; -.. EMBL; AB033931; BAB03266.1; -..
                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2004 (TrEMBLrel. 27, Last annotation update)
Secretory growth factor-like protein fallotein (Spinal cord-derived growth factor) (Platelet-derived growth factor C) (VEGF-E).
Name-hSCDGF; Synonyms-PDGFC; ORFNames-UNQ174;
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                           301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                   301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                345 AA
                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Brain;
                                                                                                                                                         241
                                                                 181
                                                                                                                                                                                                                                                                                                                                                     RESULT 2
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PREPHTYPRNITYLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LIEBVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
26-OCT-2004 (TrEMBLrel. 28, Last annotation update)
27-OCT-2004 (TrEMBLrel. 28, Last annotation update)
28-OCT-2004 (TrEMBLrel. 28, Last annotation update)
29-OCT-2004 (TrEMBLrel. 2007)
20-OCT-2006 (Mus musculus 7 days neonate cerebellum cDNA, RIKEN full-
18-DST (ADNA) (TrEMBLREN)
20-OCT-2006 (Mus musculus 7 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Mus musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Musculus 15 days embryo head cDNA, RIKEN full-length enriched library,
20-OCT-2006 (Musculus 15 days enriched library)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tsai Y.-J., Lee R.K.-K., Chen Y.-H., Lin S.-P., Cheng W.T.-K., Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 VTKKYHEVLOLRPKTGVRGIHKSLTDVALEHHEECDCVCRGSTGG 345
EMBL; AF260738; AAK51637.1; -.
HBL; AF36493; AAQ88857.1; -.
HBSP, Q9JGS8; INTO.
G0; G0:0005576; C:extracellular; NAS.
G0; G0:0008983; F:growth factor activity; TAS.
G0; G0:0007417; P:central nervous system development; TAS.
InterPro; IPR000859; CUB.
InterPro; IPR000859; Dgrowth_factor.
Pfam; PF00431; CUB; 1.
Pfam; PF00431; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    [2]
SEQUENCE FROM N.A.
STRAIN-C57BL/6J;
Gao Z., Hart C., Piddington C., Sheppard P., Shoemaker K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VTKKYHEVLQLRPKTGVRGLHKSLTDVALÆHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; PDGF 2; 1.
SEQUENCE 345 AA; 39029 MW; CDE9E51F40633E78 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1851; DB 2;
Pred. No. 1.2e-149;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ą.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345
```

```
Name=Pdgfc;
                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08CI19
   a
                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE TISSUB=Cecum, Cerebellum, and Head;
Adachi J., Aizawa K., Akimura T., Arakawa T., Bonon H., Carninci P.,
Adachi J., Aizawa K., Akimura T., Arakawa T., Bonon H., Carninci P.,
A Horis. Indexani K., Ishii Y., Itoh M., Kadawa T., Hirozane T.,
A Hori F., Indexani K., Ishii Y., Itoh M., Kadawa T., Kasukawa T.,
A Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M.,
Nahi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Osazaki Y.,
A Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Osazaki Y.,
A Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
A Tagawa A., Takakamali F., Takaku-Akahira S., Takada Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.,
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:1859631; Pdgfc.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0005161; F:platelet-derived growth factor receptor bin. .; IDA.
GO; GO:0008284; P:positive regulation of cell proliferation; IDA.
                                                                                                                                                                                                                                                                                                                             the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs."; Nature 420:563-573 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                          SECUENCE FROM N.A.
SETRAIN=C57BL/6J; TISSUB=Cecum, Cerebellum, and Head;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Worninci P., Subbraction of captrapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

STRAIN=C57BL/6J; TISSUE=Cecum, Cerebellum, and Head;
STRAIN=C57BL/6J; TISSUE=Cecum, Cerebellum, and Head;
STRAIN=20530913; PubMed=11076661; DOI=10.1101/gr.152600;
A MEDLINE=20530913; PubMed=11076661; DOI=10.1101/gr.152600;
A Konno H., Akiyama X., Nagaoka X., Sasaki N., Carninci P., Konno H., Akiyama J., Nakamura S., Hazama M., Nishine T., Harada A., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., A Yamamanco R., Matsumoto H., Sakaguchi S., Ikagami T., Kashiwaji K., A Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Matahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., A Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
TRIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
                                                     STRAIN=C57BL/6J; TISSUE=Cecum, Cerebellum, and Head; MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9; Carninci P., Hayashizaki Y.; High-efficiency full-length cDNA cloning."; Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                             "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cecum, Cerebellum, and Head;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
Gilbertson D., West J., O'Hara P.J.;
Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Cecum, Cerebellum, and Head;
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ARC03734; BAC28455.1;
ARC037734; BAC28455.1;
ARC042767; BAC31358.1;
ARC052947; BAC35216.1;
Q9JJS8; INTO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AF117608; AAF22516.1; -.
                                                                                                                                                                                                                                                Nature 409:685-690(2001).
                                                                                                                                                                                                              RIKEN FANTOM Consortium;
                                          SEQUENCE FROM N.A.
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDBRFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=CZECH II; TISSUE=Mammary tumor;

MEDLINE=22388257; Pubbled=12477932; DOI=10.1073/pnas.242603899;

Strausberg R.L., Feingold B.A., Grouse L.H., Derged J.G.,

A Strausberg R.L., Feingold B.A., Grouse L.H., Derged J.G.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peterg G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gaby E.J., Hulyk S.W.,

Villadon D.K., Marzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Fahey J., Helton B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bucked G.G.,

Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSLFGLLLVTSALAGORRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LPLDLLINNA I TAFSTLEDLI RYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
GO:0050730; P:regulation of peptidyl-tyrosine phosphoryla. . GO:0007171; P:transmembrane receptor protein tyrosine kin. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                       Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG
                                                                                                                                                                                                                                                                                                                        Growth factor; Mitogen.
SEQUENCE 345 AA; 38741 MW; 3A58A1F701B84EA2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2003 (TrEMBLrel. 23, Created)
1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Platelet-derived growth factor, C polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                       89.6%; Score 1664; DB 2;
86.7%; Pred. No. 1.2e-133;
ive 28; Mismatches 18;
                                                      InterPro; IPR000859; CUB.
InterPro; IPR000072; PD_growth_factor.
                                                                                                                      Pfam; PF00431; CUB; 1.
Pfam; PF00341; PDGF; 1.
SMART; SM00042; CUB; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS01180; CUB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 86.7%
Matches 299; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [1]
SEQUENCE FROM N.A
```

us-09-818-943-1.rup

```
Matches 295; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=Pdgfc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9JHVB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99ЛНV8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09JHV8
  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                        MGD; MGI:1859631; Pdgfc.

R GO; GO:005515; C:extracellular space; TAS.

R GO; GO:005515; C:extracellular space; TAS.

R GO; GO:0005515; C:extracellular space; TAS.

R GO; GO:000284; P:positive regulation of cell proliferation; IDA.

R GO; GO:000771; P:regulation of peptidyl-tyrosine phosphoryla. .; IDA.

R GO; GO:000771; P:regulation of peptidyl-tyrosine kin. .; IDA.

R GO; GO:000771; P:regulation of peptidyl-tyrosine kin. .; IDA.

R GO; GO:000771; P:regulation of peptidyl-tyrosine kin. .; IDA.

R Herero; IPR000859; CUB.

R Ffam; PF00431; CUB; 1.

R MART; SM0042; CUB; 1.

R RART; SM00141; PDGF; 1.

R ROSITE; PS501180; CUB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PREPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDLCKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLILGLILITSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09EQX6;
01-MAR-2001 (TERMELrel. 16, Created)
01-MAR-2001 (TERMELrel. 25, Last sequence update)
01-OCT-2003 (TERMELrel. 25, Last annotation update)
Spinal cord-derived growth factor.
Name=rScdgf;
Rattus norvegicus (Rat).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TAXID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                              Submitted (SEP-2002) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
EMBL; BC037696; AAH37696.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                       Strausberg R.; Submitted (SEP-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89.5%; Score 1662; DB 2; I
86.4%; Pred. No. 1.7e-133;
ive 29; Mismatches 18;
                                                                                                                                                                         SEQUENCE FROM N.A.
STRAIN=CZECH II; TISSUE=Mammary tumor;
                                                                                                 and mouse cDNA sequences."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 86.4
Matches 298; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                         Q9JJSB; INTO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9EQX6
                                                                                                                                                                                                                                                                                                                         HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
  RAPARA SAPARA SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCOOS BELLEVIEW ON X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [1] --
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN=Swiss-Webster/NIH;
MEDLINE=20417914; Pubmed=10960785; DOI=10.1016/S0925-4773(00)00425-1;
MEDLINE=20417914; Pubmed=10960785; DOI=10.1016/S0925-4773(00)00425-1;
Ding H., Wu X., Kim I., Tam P.P.L., Koh G.Y., Nagy A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LPLDLLANNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                       ដ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
STRAIN=Wistar; TISSUE=Kidney; MRDLINE=21092670; PubMed=11162582; DOI=10.1006/bbrc.2000.4187; Hamada T., Ui-Tei K., Imaki J., Miyata Y.; Molecular cloning of SCDGF-B, a novel growth factor homologous SCDGF/PDGF-C/fallotein."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 345;
                                                                                                                                Biochem Biophys. Res. Commun. 280:733-737(2001).

Listophys. Res. Commun. 280:733-737(2001).

Listophys. Res. Commun. 280:733-737(2001).

R MSB1, AB03330; BAB19969.1; -. BAB194891.170.

R HSSP; Q9JUS8; INTO.

R GO; GO:0008031; F:growth factor activity; IEA.

R GO; GO:0008031; F:growth factor activity; IEA.

R GO; GO:0008031; F:equl proliferation; IEA.

R GO; GO:000074; P:regulation of cell cycle; IEA.

R InterPro; IPR000072; PD_growth_factor.

R Pfam; PF00431; CUB; 1.

R SMART; SM00041; DDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88.6%; Score 1646; DB 2; Length 3
85.5%; Pred. No. 4e-132;
ive 30; Mismatches 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; POGF 2; 1.
Growth factor; Mitogen.
SEQUENCE 345 AA; 38734 MW; F296DA6E9B765D10 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Platelet-derived growth factor C.
```

```
241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8K429;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D D T T T D D T T T D D T T T D D T T T D D T T T D D T T T T D D T T T T D D T T T D D T T T D D T T D D T T D D T T D D T T D D T T D D T T D D T T D D T T D D T T D D T T D D T T D D T T D D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T D T T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D T D 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 LKEEVKLYSCTPRNFSVSIREELKRIDTRFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECOCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                   Mech. Dev. 96:209-213 (2000).
BY PES6725; AAF91483.1; -
HSSP; Q9J388; 1NTO.
MCD; MGI:1856631; Pegfc.
GO; GO:0005161; F:platelet-derived growth factor receptor bin. .; IDA.
GO; GO:0005264; P:positive requiation of cell proliferation; IDA.
GO; GO:0005109; P:regulation of peptidyl-tyrosine phosphoryla. .; IDA.
GO; GO:001111; P:transmembrane receptor protein tyrosine kin. .; IDA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN=white leghorn; TISSUB=Spinal cord;
MEDLINE=20317014; PubMed=10858496; DOI=10.1016/S0014-5793(00)01640-9;
Hamada T., Ui-Tei K., Miyata Y.;
"A novel gene derived from developing spinal cords, SCDGF, is a unique member of the PDGF/VEGF family.";
PEBS Lett. 475:97-102(2000).
-! SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
EMBL; AB033829; BAB03265.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRWCGSETVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Spinal corderived growth factor.
Name=SCDGF;
Gallus (Chicken).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
"The mouse Pdgfc gene: dynamic expression in embryonic tissues during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 88.0%; Score 1635; DB 2; Length 3 Best Local Similarity 85.5%; Pred. No. 3.5e-131; Matches 295; Conservative 28; Mismatches 22; Indels
                                                                                                                                                                                                                                           InterPro; IRR000859; CUB.
InterPro; IRR000859; CUB.
InterPro; IRR000072; PD_growth_factor.
InterPro; IRR000072; PD_growth_factor.
SMART; SM00042; CUB; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS01180; CUB; 1.
PROSITE; PS02789; PDGF 2; 1.
SEQUENCE 345 AA; 38886 MW; FA1486BED6D362F8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q91946 PRELIMINARY; PRT; 345 AA.
Q91946;
Q1-0CT-2000 (TrEMBLrel. 15, Created)
01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-0CT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gallus.
NCBI_TaxID=9031;
                          organogenesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
```

```
PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LKEBVRLYSCTPRNFSVSLREELKRTDTIFWPLCLLVKRCGGNCACCHONCNECOCIPTK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PKPPHTYPRNTVLVWRLVAVDENVWIQLTFDERFGLEDPEDDICKYDFVEVEEFSDGTVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Rat).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN=Sprague-Dawley; TISSUE=Skin;
Brown S.A., Coberly D.M., Rohrich R.R., Chao J.J.;
Brown S.A., Coberly D.M., Rohrich R.R., Chao J.J.;
Brown S.A., Coberly D.M., Rohrich R.R., Chao J.J.;
Submitted (May-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, AF508348; AAM47265.1; -..
HSSP; Q9108188; INTO.
GO, GO:0016020; C:membrane; IEA.
GO; GO:0008151; P:growth factor activity; IEA.
GO; GO:0008151; P:growth factor anintenance; IEA.
InterPro; IPR00072; PD_growth_factor.
FREM; PF00431; CUB.
SMART; SM0042; CUB.
PROSITE; PS01180; CUB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                        Growth factor; Mitogen.
SEQUENCE 345 AA; 38940 MW; 97ACEA992BF5128C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Platelet-derived growth factor C (Fragment).
GO; GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0000074; P:regulation of cell cycle; IEA.
InterPro; IPR000859; CUB.
InterPro; IPR000859; CUB.
InterPro; IPR0031; PD_growth_factor.
Pfam; PF00331; PDGF; 1.
ProDom; PD001629; PD_growth_factor; 1.
SWART; SM00042; CUB; 1.
PROSITE; PS01180; CUB; 1.
PROSITE; PS01180; CUB; 1.
PROSITE; PS01180; CUB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Score 1614; DB 2;
; Pred. No. 2.2e-129;
31; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 289; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
```

ö

φ

```
(TrEMBLrel. 17, (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 159; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDCIC 364
                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001
01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9BWV5
Q9BWV5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
Q9BWVS
ID Q9BWV
AC Q9BWV
DT 01-JUD
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                             191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                  61 DLCKYDFVEVEEPSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYS 120
                                                                                                                                                                                                                                                                                                                                                                                162 IVWPQFTEAVSPSVLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQ 221
                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-21231380; PubMed=11331882; DOI=10.1038/35074593;
MEDLINE-21231380; PubMed=11331882; DOI=10.1038/35074593;
LiaRochelle W.J., Jeffers M., McDonald W.F., Chillakuru R.A.,
Giese N.A., Locker N.A., Sullivan C., Boldog F.L., Yang M., Vernet C.,
Burgess C.E., Fernandez E., Deegler L.L., Rittman B., Shimkets J.,
Shimkets R.A., Rothberg J.M., Lichenstein H.S.;
"PDGF D, A Novel Protease-Activated Growth Factor.";
Nat. Cell Biol. 3:517-521(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Spinal cord-derived growth factor-B (MSTP016) (Platelet-derived growth factor D) (Iris-expressed growth factor long form).
Name-hSCDGF-B; Synonyms=IEGF, PDGFD;
Home sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
TISSUE-Actra;
TISSUE-Actra;
Liu B., Liu Y.Q., Wang X.Y., Zhao B., Sheng H., Zhao X.W., Liu S.,
Xu Y.Y., Ye J., Song L., Gao Y., Zhang C.L., Zhang J., Wei Y.J.,
Cao H.Q., Zhao Y., Liu L.S., Ding J.F., Gao R.L., Wu Q.Y., Qiang B.Q.,
Yuan J.G., Liew C., Zhao M.S., Hui R.T.;
Submitted (DEC-1998) to the EMBL/GenBark/DBU databases.
                                                                                                                                                                                                                              1 QDPRHERVVTISGNGSIHSPKFPHTYPRNTVLVWRLVAVDENVRIQLTFDERFGLEDPED
                                                                                                                                                                                                                                                                                           102 DICKYDFVEVEEPSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLGKAFVFGRKSRVVDLNLLTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QDPQHERIITVSTNGSIHSPRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPED
                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

BUNDAG=1131881; DOI=10.1038/35074588;
BETGSTEN E., Uutela M., Li X., Pietras K., Ostman A., Heldin C.H., Alitalo K., Exiksson U.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=21092670; PubMed=11162582; DOI=10.1006/bbrc.2000.4187; Hamada T., Ui-Tei K., Imaki J., Miyata Y.; "Molecular cloning of SCDGF-B, a novel growth factor homologous SCDGF/PDGF-C/fallocain."; Biochem. Biophys. Res. Commun. 280:733-737(2001).
                                                                                                                                                           .
                                                                                                                 Length 258;
                                                                                                                                                           Indels
                                                                   29255 MW; 88625B989FCC3F8B CRC64;
                                                                                                             67.8%; Score 1260; DB 2;
85.6%; Pred. No. 2.6e-99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     370 AA
                                                                                                                                                           25; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2001 (TrEMBLrel. 16, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GNCACCLHNCNECQCVP 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GNCACCLHNCNECQCVP 298
PS50278; PDGF_2; 1.
                                                                                                                                                         Matches 220; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                         1
258 2
258 AA;
                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                              SEQUENCE
                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                    NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9GZP0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HID DE SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO COOK SOO C
RETES
                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
```

```
118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183 WESVTSSISGVSYNSPSVTDPT-LIADALDKKIARFDTVEDLLKYFNPESWQEDLENMYL 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KRCGGNCACCLHNCNECQCVPSKVTKKYHEVLQLRP---KTGVRGLHKSLTDVALEHHEE 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : | : : | | : : | | : | | : | | : | | | : | | | : | | | : | | | : | | | : | | | : | | | : | | : | | | : | | : | | | : | : | | | : | : | | : | | : | | : | : | | : | : | | : | : | | : | : | | : | : | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSPRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65 QSPRFPNSYPRNLLLTWRLHS-QENTRIQLVFDNQFGLEEAENDICRYDFVEVEDISETS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --ILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242 DTPRYRGRSY-HDRKSK-VDLDRLNDDAKRYSCTPRNYSVNIREELKLANVVFFPRCLLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300 QRCGGNCGCGTVNWRSCTCNSGKTVKKYHEVLQFEPGHIKRRGRAKTMALVDIQLDHHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 172 ------SPSVLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218 PTWQLLGKAFVFGRKSRVVDLNLLTEEVRLYSCTPRNFSVSIRBELKRTDTIFWPGCLLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 LFGLLLVTSALAGORRGTOAESNLSSKFOFSSN---KEONGVOD-POHERIITVSTNGSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wistow G., Berstein S.L., Ray S., Wyatt M.K., Behal A., Touchman J.W. Bouffard G., Smith D., Peterson K.;
"Expressed sequence tag analysis of adult human iris for the NEIBank Project: steroid-response factors and similarities with retinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
"PDGF-D is a specific, protease-activated ligand for the PDGF beta-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   139.9%; Score 741.5; DB 2; Length 370; Similarity 43.6%; Pred. No. 8.1e-55; S9; Conservative 59; Mismatches 114; Indels 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium."; | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. | Digment epithelium. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; PDGF 2; 1.
PROSITE; PS0430; TONE DEPENDENT REC 1; UNKNOWN 1.
PROSITE; 370 AA, 42848 MW; D387F485E7BB7674 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=1ris;
MEDLINE=22103462; PubMed=12107412;
                                                                                                                                                   Nat. Cell Biol. 3:512-516(2001)
```

10;

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Straubberg R.L., Feingold E.A., Grouse L.H., Derged J.G.,
Nauener R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Scheefer C.F., Bahat N.K.,
Altschul S.F., Zeeberg B., Buetow K.H., Scheefer C.F., Bahat N.K.,
A physins R.F., Jordan H., Moore T., Mang J., Hsieh F.,
A piatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
B piatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
B properties M.J., Usdin T.B., Tooshiyuki S., Carninci P., Prange C.,
B Brownstein M.J., Usdin T.B., Tooshiyuki S., Carninci P., Prange C.,
B Brownstein M.J., Usdin T.B., Tooshiyuki S., Carninci P., Prange C.,
B Raba S.S., McZhew P.J., McKernan K.J., Malek J.A., Glubs R.A.,
A Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glubs R.A.,
A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glubs R.A.,
Blakesley M., Helton B., Ketteman M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
A Jones S.J., Marra M.A.,
B. Marra M.A., Sones E.D., Schmerch A., Schein J.E.,
B. Marra M.A., Sones E.J., Schnerch A., Schein J.E.,
B. Marra M.A., Sones E.J., Marra M.A.,
B. Marra M.A., Sones E.J., Schnerch A., Schein J.E.,
B. Marra M.A., Sones E.J., Schnerch A., Schein J.E.,
B. Marra M.A., Sones E.J., Marra M.A.,
B. Marra M.A., Sones E.J., Borles E.J., Borles E.J., Marra M.A.,
B. Marra M.A., Sones E.J., Borles E.J., Borles E.J., Borles E.J., Marra M.A.,
B. Marra M.A., Sones E.J., Borles E.J., B
                                                                                                                                                                                                                TISSUE-Iris;
MEDLINE-22103462; PubMed-12107412;
Mistow G., Berstein S.L., Ray S., Wyatt M.K., Behal A., Touchman J.W.,
Bouffard G., Smith D., Peterson K.;
"Expressed sequence tag analysis of adult human iris for the NEIBank
Project: steroid-response factors and similarities with retinal
pigment epithelium."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatice assessment."; Genome Res. 13:2265-2270 (2003).

EMBL; AV027518; AAX20082.1; -...

EMBL; AV027518; AAX20082.1; -...

EMBL; AV027518; AAX20082.1; -...

EMBL; AV027516; AAX30645; 1; -...

EMBL; AV027516; AAX30645; 1; -...

EMBL; AV05751, JC7591.

HSSP; Q9JJS8; 1NT0.

GO; GO:0016020; C:membrane; IEA.

GO; GO:0016083; F:growth factor activity; IEA.

GO; GO:0008131; P:cell growth and/or maintenance; IEA.

InterPro; IPP000859; CUB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003; Clark H.F., Gurney A.L., Abaya B., Baker K., Baldwin D., Brush J., Chow B., Chwi C., Crowley C., Currell B., Deuel B., Dowd P., Eaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S., Huang A., Kim H.S., Klimowski L., Jin Y., Johnson S., Lee J., Lewis L., Liao D., Mark M., Robbie B., Sanchez C., Schoenfeld J., Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A., Vandlen R., Watanabe C., Wiesand D., Woods K., Xie M.H., Yansura D., Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I.,
                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                    Iris-expressed growth factor short form (Platelet derived growth
factor D, isoform 2) (SCDGF-B).
Name=IEGF; Synonyms-PDGFD; ORFNames=UNQ1899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Strausberg R.;
Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases
    25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000072; PD_growth_factor
                                                                                                                                                                                                                                                                                                                                                                        Vision 8:185-195(2002).
                                                                                        (Human)
                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                   NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Testis;
                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Godowski P.;
```

```
281
                                                                                                                                                                                                                                                                                                                                                                                                                                        FPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFSDGT--1L 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63 PPNSYPRNLLLTWRLHS-QENTRIQLVFDNQFGLEEAENDICRYDFVEVEDISETSTIIR 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122 GRWCGHKEVPPRIKSRINQIKITFKSDDYFVAKPGFKIYYSL-LEDFQPAAASETNWESV 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 TSSISGVSYNSPSVTDPT-LIADALDKKIAEFDTVEDLLKYFNPESWQEDLENMYLDTPR 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240 YRGRSY-HDRKSX-VDLDRLMDDAKRYSCTPRNYSVNIREBLKLANVVFFPRCLLVQRCG 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  282 GNCACCLHNCNECQCVPSKVTKKYHEVLQLRP---KTGVRGLHKSLTDVALEHHEECDCV 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=21231380; PubMed=11331882; DOI=10.1038/35074593;
LaRochelle W.J., Joffers M., McDonald W.F., Chillakuru R.A.,
Giese N.A., Lokker N.A., Sullivan C., Boldog F.L., Yang M., Vernet C.,
Burgess C.E., Pernandez E., Deegler L.L., Rittman B., Shimkets J.,
Shimkets R.A., Rothberg J.M., Lichenstein H.S.;
"PDGF D, A Novel Procease-Activated Growth Factor.";
Nat. Cell Biol. 3:517-521(2001).
                                                                                                                                                                                                                                                                                                                                                            GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----SPSVLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              222 LLGKAFVFGRKSRVVDLNLLTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCG
                                                                                                                                                                                                                                                                                                                       3 LFGLLLVTSALAGORRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHSPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6J; TISSUE-Whole body;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q92517; Q9D1L8;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
05-UUL-2004 (TrEMBLrel. 27, Last annotation update)
Platelet-derived growth factor D (Mus musculus 18-day embryo whole body cDNA, RIKEN full-length enriched library, clone:1110003109 product:platelet-derived growth factor D).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                          31;
                                                                                                                                                                                                39.9%; Score 740.5; DB 2; Length 364; 43.2%; Pred. No. 9.7e-55; Live 61; Mismatches 113; Indels 31;
                  PROSITE; PRO131; CUB; 1.
PROSITE; PS01180; CUB; 1.
PROSITE; PS0128; PGC=2; 1.
PROSITE; PS00430; TONB DEPENDENT REC 1; UNKNOWN 1.
SEQUENCE 364 AA; 42166 WW; 245C53E8DDEA9EAC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Whigh Enzymol. 303:19-44(1999).
[3]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            370 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
InterPro; IPR010916; TONB_Box_N.
                                                                                                                                                                                                                              ilarity 43.2%;
Conservative 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                339 C 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=BALB/c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ċ 358
                                                                                                                                                                                                                              Local Simi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=Pdgfd;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             358
                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         092517
                                                                                                                                                                                                                                        Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
Q925I7
```

us-09-818-943-1.rup

```
Spinal-cord derived growth factor-B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. 16, (TrEMBLrel. 16, (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 45.08
Matches 149; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Name=rSCDGF-B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2001
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          196
                                                                                                                                                                                                                                                                                                   235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96
75
                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCOCC OS BET THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE TENT OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                               g
                                                                                 ò
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

Adachi J., Aizawa K., Akimura T., Arai A., Aono H.,

Adachi J., Aizawa K., Akimura T., Fukunishi Y., Furuno M.,

Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,

Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,

Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,

Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,

A Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,

Sano H., Sasaki D., Shibata K., Shibata C., Sakai C., Sakai C.,

Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,

Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,

Muramatsu M., Hayashizaki Y.,

Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.

EMBL, AK003359; BAB22735.2; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AKOUJJS, ....
HSSP; Q9JJSB; INTO.
MGD; MGI:1919035; Pdgfd.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0050730; P:regulation of peptidyl-tyrosine phosphoryla. . .; IDA.
GO; GO:0050730; P:regulation of peptidyl-tyrosine phosphoryla. . .; IDA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SIDATAR=C57BL/60; IISSUE=Whole body;

A Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P.,

Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P.,

A Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,

Yamamotor R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,

Pujiwake S., Inoue K., Togawa Y., Isawa M., Ohara E., Watahiki N.,

Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,

A Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

RIKEN integrated sequence analysis (RISA) system-384-format

sequencing pipeline with 384 multicapillary sequencer.";
                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE=Whole body;
The FANTOM Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
"Analysis of the mouse transcriptome based on functional annotation of
60,770 full-length oDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINE=C57BL/6J; TISSUE=Whole body;
MEDLINE=C9499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Wormalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16 ORRGIOAESNLSSKFOFSSNKEONGVOD-POHERIITVSTNGSIHSPRFPHTYPRNTVLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                 "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2; Length 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59; Mismatches 103; Indels
                  STRAIN=CS7BL/6J; TISSUE=Whole body;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; PDGF 2; 1.
SEQUENCE 370 AA; 42809 MW; 9E80B4CF6813BFBE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             39.7%; Score 737.5; DB 2 44.0%; Pred. No. 1.8e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 153; Conservative
                                                                      RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
8
```

```
6
                                 WWLRS-QEKTRIQLSFDHQFGLEEAENDICRYDFVEVSESSTVVRGRWCGHKEIPPR 139
                                                                                                                                                                                   199
                                                                                                                                                                                                                                                     234
                                                                                                                                                                                                                                                                                   294
                                                                                                                                                                                                                                                                                                                                                                                                          258 -VDLDRLNDDVKRYSCTPRNHSVNLREELKLINAVFFPRCLLVQRCGGNCGCGTVNWKSC 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNLLTEEVRLYSCTPRNF 255
WRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGT--ILGRWCGSGTVPGK 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

MEDLINE=21092670; PubMed=11162582; DOI=10.1006/bbrc.2000.4187;
Hamada T., Ui-Tei K., Imaki J., Miyata Y.;
Hamada T., Ui-Tei K., Imaki J., Miyata Y.;
Molecular cloning of SCDGF-B, a novel growth factor homologous to SCDGF/PDGF-C/ED SCDGF-B, a novel growth factor homologous to SCDGF/PDGF-C/ED SEDGE-B, a novel growth factor homologous to SCDGF/PDGF-C/ED SAB18220.1;

B score AB052170; BAB18220.1;

R HSSP, Q9UCV4; 1N21.

R GO; GO:0016020; C:membrane; IEA.

GO; GO:0016021; F:growth factor activity; IEA.

GO; GO:00151; P:growth and/or maintenance; IEA.

InterPro; IPR000859; CUB.

InterPro; IPR000072; PD_growth_factor.

R Fam; PF00411; CUB; 1.

SMART; SM00141; PDGF; 1.
                                                                                                                                                            PGFKIYYSFVEDFQPEAASEINWESVTSSFSGVSYHSPSVM-DSTLTADALDKAIAEFDT
                                                                                                                                                                                                                                                  175 VLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSR
                                                                                                                                                                                                                                                                                                                                                                             VVDLNLLTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EQNGVQD-PQHERIITVSTNGSIHSPRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LEDPEDDICKYDFVEVEPSDGT--ILGRWCGSGTVPGKQISKGNOIRIRFVSDEYFPSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PGFCIHYNIV---MPQFTEAV------SPSVLPPSALPLDLLNNAITAFST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295 QCVPSKVTKKYHEVLQLRP---KTGVRGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         317 TCSSGKTVKKYHEVLKFEPGHFKRRGKAKNMALVDIQLDHHERCDCIC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39.6%; Score 736; DB 2; Length 370; 45.6%; Pred. No. 2.4e-54; ive 57; Mismatches 93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; PDGF 2; 1.
SEQUENCE 370 AA; 42809 MW; 7BE8A251F679BF73 CRC64;
                                                                                                                          133 QISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
```

```
ALD DIT THE SECOND TO THE SECOND TO THE SECOND TO THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE SECOND THE S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
220 VEDLIKYFNPASWQDDLENLYMDTPRYRGRSY-HERKSK-VDLDRLNDDVKRYSCTPRNH 277
                                                               SVSIRBELKRIDII PWPGCLLVKRCGGNCACCLHNCNECQCVPSKVTKKYHEVLQLRP-- 313
                                                                                           121 AASETIWWESVTSSISGVSYHNPSVTDPT-LTADALDKTIAEFDTVEDLLKHFNPESWQED 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PGCLLVKRCGGNCACCLHNCNECQCVPSKVTKKYHEVLQLRP---KTGVRGLHKSLTDVA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LEDLYRPIWOLLGKAFVFGRKSRVVDLNLLTEEVRLYSCTPRNFSVSIREELKRIDTIFW 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52 VSTNGSIHSPRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EEPSDGT--ILGRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----MPQFTEAVS-----PSVLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWOLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P. SECURATE, INST. ......

A. Ray S., Wistow G.;

L. Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.

R. Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.

R. Go; GO:0016020; C:membrane; IEA.

R. GO; GO:0016029; F:growth factor activity; IEA.

R. GO; GO:0008083; F:growth factor activity; IEA.

R. GO; GO:0008083; F:growth factor.

R. GO; GO:0008093; CuB.

R. InterPro; IPR00072; PD-growth_factor.

DR. SMART; SW00042; CuB; 1.

DR. SMART; SW00042; CuB; 1.

DR. SMART; SW00180; CuB; 1.

DR. PROSITE; PS01180; CuB; 1.

DR. PROSITE; PS01180; CuB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300 300
300 AA; 34616 MW; 716C873C9C01C0C6 CRC64;
                                                                                                                                                                                                                                                                                                                                              05-JUL-2004 (TrENBLrel. 27, Last sequence update)
05-JUL-2004 (TrENBLrel. 27, Last annotation update)
Iris-expressed growth factor (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36.0%; Score 669.5; DB 245.9%; Pred. No. 8.9e-49;
                                                                                                                                                                                                                                                                                                              300 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              51; Mismatches
                                                                                                                                                      314 -KTGVRGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                               338 FKRRGKAKNWALVDIQLDHHERCDCIC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 45,9°
Matches 139; Conservative
                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |:|
LDH 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LEH 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NON TER
NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      329
                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                    ઠે
                                                                                                                                                                                             셤
                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
```

```
SEQUENCE FROM N.A.

STAIN=FYBON J. SUGE-Mammary tumor;

STAIN=FYBON J. ISSUE-Mammary tumor;

MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

Altschul S.F., Zeelbrin F.S., Wagner L., Shemmen C.M., Schuler G.D.,

Altschul R.P., Jordan H., Moore T., Max S.I., Mang J., Haiteh F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Robert S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Brownstein M.J., McKerran R.J., Malke J.A., Gunarathe P.H.,

Rabask S.A., McZwan P.J., McKerran R.J., Mallek J.A., Gunarathe P.H.,

MICHARD D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Nilalon D.K., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           75 WRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGT--ILGRWCGSGTVPGK 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81 WMLRS-QEKTRIQLSFDHQFGLEEAENDICRYDFVEVEEVSESSTVVRGRWCGHKEIPPR 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              175 VLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWOLLGKAFVFGRKSR 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : |: | | | |::: | |:|||::: | |||||:|| | | |||::: | |||::: | |||::: | |||::: ||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: |||::: ||::: |||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||:: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||:: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||:: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||:: ||::: ||::: ||::: ||::: ||::: ||::: ||::: ||:: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26 QRASIKALRNANLR----RDESNHLTDLYQREENİQVTSNGHVQSPRFPNSYPRNLLLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16 QRRGTQAESNLSSKFQFSSNKEQNGVQD-PQHERIITVSTNGSIHSPRFPHTYPRNTVLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 23.4%; Score 435.5; DB 2; Length 261; Best Local Similarity 39.8%; Pred. No. 7.3e-29; Ac: Mismatches 73; Indels 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Straubberg R.;
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
BMBL; B030896; A4H30896.1; -.
MSD; MGJ:1919035; Pdgfd.
MGD; MGI:1919035; Pdgfd.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0050730; P:regulation of peptidyl-tyrosine phosphoryla.
InterPro; IPR000859; CUB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133 QISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS01180; CUB; 1.
SEQUENCE 261 AA; 30228 MW; 2EEC3F6373A52D09 CRC64;
                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=FVB/N; TISSUE=Mammary tumor;
                                                                                                                           01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mouse cDNA sequences.
PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00431; CUB; 1.
SMART; SM00042; CUB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             235 VVDL 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

```
Search completed: September 3, 2005, 19:29:41
Job time: 117.5 secs
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shoji W., Tawarayama H.;

The cloning and expression of neuropilin-1.";

The cloning and expression of neuropilin-1.";

The cloning and expression of neuropilin-1.";

The cloning and expression of new constant of the cardiovascular system, in angiogenesis, in the formation of certain neuronal circuits and in organogenesis outside the nervous system. It mediates the chemorepulsant activity of semaphorins.

Segulates angiogenesis through a VEGF-dependent pathway.

System. It mediates the chemorepulsant activity of semaphorins. Regulates angiogenesis through a VEGF-dependent pathway.

System. It mediates Expressed both maternally and zygotically. Maternal transcripts are widely expressed until the early gastrula stage, then become localized to the yolk syncytial layer. During somatogenesis and later stages of development, expression occurs mainly in neuronal and vascular tissues.

SIMILARITY: Contains 2 CUB domains.

SIMILARITY: Contains 2 PG/8 type C domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A., FUNCTION, AND DEVELOPMENTAL STAGE.
STRAIN=AB; TISSUE=Embryo;
PubMed=12144468; DOI=10.1073/pnas.162366299;
Lee P., Goishi K., Davidson A.J., Mannix R., Zon L., Klagsbrun M.;
"Neuropilin-1 is required for vascular development and is a mediator of VEGF-dependent angiogenesis in zebrafish.";
Proc. Natl. Acad. Sci. U.S.A. 99:10470-10475(2002).
                                                                                                                                                                                                     Brachydanio rerio (Zebrafish) (Danio rerio).

Eukaryota, Metazoa; Chordata, Craniata, Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
                                                                                                        Q8QFX6; Q8AXP1;
05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
NG-JUL-2011in-1 precursor (znrp1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000859; CUB.
InterPro; IPR008059; CUB.
InterPro; IPR008079; Gal bind_like.
InterPro; IPR008079; Gal bind_like.
Fean; PF00431; CUB; 2.
Pfan; PF00754; F5 F8 type_C; 2.
Pfan; PF00629; MAM; 1.
SWART; SW00042; CUB; 2.
SWART; SW00043; CUB; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AY064213; AAL40862.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; O14786; IKEX.
ZFIN; ZDB-GENE-030519-2; nrpl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS01180; CUB; 2.
PROSITE; PS01285; FS48C_1; 1.
PROSITE; PS01286; FA58C_2; 2.
PROSITE; PS50022; FA58C_3; 2.
                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
   :::
258 GIEV 261
                                                                                             BRARE
```

```
65 HTYPRNTVLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVEPSD--GTILGR 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123 WCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMP-----QFTEAVSPSVL 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     157 KSPGFPEKYPNNLDCTFMIFAPKMSEIVLEFESFELEPDTQP-----PAGVFCRYDRL 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177 PPSALPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRV 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 GLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHSPRFP
                                                                                                                                                                                                                                 PROSITE; PS00740; MAM_1; 1.
PROSITE; PS50060; MAM_2; 1.
Angiogenesis; Glycoprotein; Neurogenesis; Receptor; Repeat; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                         49;
                                                                                                                                                                                                                                                                                                                                                                                            10.3%; Score 190.5; DB 1; Length 923; 27.6%; Pred. No. 3e-07; tive 29; Mismatches 95; Indels 49.
                                                  Potential.
Neuropilin-1.
Extracellular (Potential).
                                                                                                 Cytoplasmic (Potential).
CUB 1.
CUB 2.
                                                                                                                                             F5/8 type C
F5/8 type C
                                                                                                                                                                                                 Probable.
Probable.
                                                                                           Potential
                                                                                                                                                                                   Probable.
                                                                                                                                                                                                                          Probable.
                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 27.63
Matches 66; Conservative
                                                                            DOMAIN
TRANSMEM
DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                     DOMAIN
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                              CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                    CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                       DISULPID
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                   SIGNAL
```

Н

ĕ

```
Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 345
TYPE: PRT
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Simi
Matches 343;
                                                                                                                                                                                                                                                                                                                                                                         US-09-040-220D-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-040-220D-2
                806
806
741.5
741.5
741.5
741.5
741.5
741.5
741.5
741.5
741.5
741.5
737.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Appli
Sequence 2, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 33, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2, Appli
118, App
2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Appli
                                                                                            15 ; Search time 30 Seconds (without alignments) 858.464 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55,
                                                                                                                                                                                          1 MSLFGLLLVTSALAGQRRGT.....DVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                    nued Patents AA:*
/cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-040-220D-2

US-09-457-066-2

US-09-56-686-2

US-09-56-568-2

US-09-76-968-2

US-09-76-968-2

US-09-468-647A-110

US-09-468-647A-110

US-09-468-647A-110

US-09-468-647A-110

US-09-468-647A-110

US-09-468-647A-122

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-468-647A-123

US-09-823-033-4

US-09-823-033-4

US-09-823-033-4

US-09-823-033-4

US-09-823-033-4

US-09-823-033-4
                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                          513545 segs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                            September 3, 2005, 19:19:05
                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                              protein search, using sw model
                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                     seq length: 0
seq length: 200000000
                                                                                                                                                        US-09-818-943-1
1858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
               Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Issued
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . . . .
                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Perfect score:
                                                                                                                                                                                                                                                                                                                                         Minimum DB
Maximum DB
                                                               protein
                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                               ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Result
                                                                                            Run
```

```
27, Appl
126, Appl
126, Appl
2, Appli
37, Appli
2, Appli
8, Appli
37, Appl
4, Appli
4, Appli
4, Appli
4, Appli
4, Appli
4, Appli
4, Appli
4, Appli
4, Appli
sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence seq
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence Sequence Sequence Sequence
               US-09-468-647A-111
US-09-468-647A-111
US-09-468-647A-126
US-09-457-066-37
US-09-540-224-2
US-09-566-595D-2
US-09-808-37
US-09-808-37
US-09-808-37
US-09-808-37
US-09-808-37
US-09-808-37
US-09-808-37
US-09-808-37
US-09-808-37
US-09-540-224-4
US-09-540-234-4
US-09-540-234-4
US-09-808-955D-53
```

ALIGNMENTS

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
Sequence 2. Application US/09040220D

Become No. 6391311

GENERAL INFORMATION:
APPLICANT: PETRIARA Napoleone
APPLICANT: KNO. Sophia S.
TITLE OF INVENTION: NOVEL POLYPEPTIDES HAVING HOMOLÒGY TO VASCULAR
TITLE OF INVENTION: EMOTHELIAL CELL GROWING SAME, THEIR OF INVENTION:
TITLE OF INVENTION: AND PROCESSES FOR THEIR PRODUCTION
TITLE OF INVENTION: AND PROCESSES FOR THEIR PRODUCTION
FILE REPRENNE: P1122
CURRENT APPLICATION NUMBER: US/09/040,220D
CURRENT FILING DATE: 1998-03-17
NUMBER OF SEQ ID NOS: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LIEEVRLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSLFGLLLITSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GRWCGSGTVPGKQISKGNQIRIRRFVSDBYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1851; DB 3;
Pred. No. 8.3e-193;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.6%;
larity 99.4%;
Conservative
```

```
Query Match
Best Local Simi
Matches 343;
JS-09-265-686-2
                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                               g
                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                   8
                                                                                                                               셤
                                                                                                                                                                   à
                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PRFPHTYPRNTVLVWRLVAVERNVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PRFPHTYPRNTVLVWRLVAVEENVWIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 LPLDLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LTEEVRLYSCTPRNFSVSIREELKRTDT1FWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSLFGLLLVTSALAGORRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSLFGLLLTSALAGQRQCTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Ferrara, Napoleone
APPLICANT: Ferrara, Napoleone
APPLICANT: Kuo, Sophia S.
TILE OF INVENTION: DOLYPEPTIDES HOMOLOGOUS TO VEGF AND BMPI
FILE REFERENCE: P1122P2
CURRENT APPLICATION NUMBER: US/09/265,686
CURRENT APPLICATION NUMBER: US 09/040,220
PRIOR PILING DATE: 1998-03-17
PRIOR FILING DATE: 1998-11-02
NUMBER OF SEQ ID NOS: 8
SEQ ID NO 2
LENGTH: 345
TYPE: PRT
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                             Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VIKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
99.6%; Score 1851; DB 4;
Best Local Similarity 99.4%; Pred. No. 8.3e-193;
Matches 343; Conservative 2; Mismatches 0;
                                                                                                                                                                                                      ZVEGF3
        US-0915-066-2
Sequence 2, Application US/09457066
Sequence 2, Application US/09457066
Sequence 2, Application US/09457066
Sequence 2, Application US/09457066
Sequence 2, Application US/09457066
APPLICANT: Gao, Zeren
APPLICANT: Sheppard, Paul O.
APPLICANT: Sheomaker, Kimberly E.
APPLICANT: Sheomaker, Kimberly E.
APPLICANT: Gilbertson, Debra G.
APPLICANT: West, James W.
TITLE OF INVENTION: GROWTH FACTOR HOWOLOG ZVE
CURRENT APPLICATION NUMBER: US/09/457,066
CURRENT APPLICATION NUMBER: US/09/457,066
CURRENT FILING DATE: 1999-12-07
NUMBER OF SEQ ID NOS: 50
SOFTWARE: FeatSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application US/09265686
Patent No. 6455283
                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
US-09-265-686-2
                                                                                                                                                                                                                                                                                                                                                                           US-09-457-066-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

```
300
                                                                                                                                                                                          120
                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 LIEEVRLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEFSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                           9
                                                                                                                                                                                                                     61 PREPHTYPRNTVLVWRLVAVEENVMIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                181 LPLDLIANNAITAFSTLEDLIKYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSLFGLLLISALAGQRQGTQAESNLSSKFQPSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSLFGLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                            61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVERPSDGTIL
                                                                                                                                                                                                                                                                                       GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                  LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 LPLDLLNNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL
                                                                                                  1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                   ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 345;
Score 1851; DB 4; Length 345;
Pred. No. 8.3e-193;
2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 VIKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT GILDERSON, Debra G.
APPLICANT GILDERSON, Debra G.
APPLICANT GILDERSON, DEBLA G.
TITLE OF INVENTION: LIGAMENT AND CARTILAGE USING ZVEGF4
TITLE OF INVENTION: LIGAMENT AND CARTILAGE USING ZVEGF4
FILE REPERENCE: 00-28
CURRENT APPLICATION NUMBER: US/09/540,224
CURRENT PILING DATE: 2000-03-31
CURRENT PILING DATE: 2000-03-04
NUMBER OF SEQ ID NOS: 9
SOFTWARE: FRALSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 345
TYPE: PRT
TYPE: PRT
CORANISM: Homo sapiens
US-09-540-224-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1851; DB 4;
Pred. No. 8.3e-193;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-540-224-5; Sequence 5, Application US/09540224; Sequence No. 6468543; Patent No. 6686843; GENERAL INFORMATION:
  99.6%;
99.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.6%;
ilarity 99.4%;
Conservative
    Query Match
Best Local Similarity 99.4
Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
```

```
PRFPHTYPRNTVLVWRLVAVEENVWIQLIFDERFGLEDPEDDICKYDFVEVEEFSDGTIL 120
                       LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECCCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRFPHTYPRNTVLVWRLVAVEBNVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LPLDLLINNATTAFSTLEDDIRYLEPERMOLDLEDLYRPTWOLLGKAFVFGRKSRVYDLN1 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LTEEVRLYSCTPRNFSVSIREELKRTDT1FWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTEEVRLYSCTPRNPSVSIREELKRTDTIFWFGCLLVKRCGGNCACCLHNCNECCCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSLFGLLLTSALAGQRQTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LPLDLLMNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.6%; Score 1851; DB 4; Length 345; 99.4%; Pred. No. 8.3e-193; ive 2; Mismatches 0; Indels
                                                                                                        301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                              VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                              APPLICANT: Gilbert, Teresa
APPLICANT: Gilbert, Teresa
APPLICANT: Sheppard, Paul O.
TITLE ON TOWN GROWTH FACTOR HOMOLOG ZVEGF4
FILE REFERENCE: 99-19
CURRENT APPLICATION NUMBER: US/09/564,595D
CURRENT FILING DATE: 1999-05-03
PRIOR PILING DATE: 1999-05-03
PRIOR PLLING DATE: 1999-11-10
PRIOR APPLICATION NUMBER: US 60/164,463
PRIOR APPLICATION NUMBER: US 60/169
PRIOR PILING DATE: 1999-05-04
PRIOR PILING DATE: 1999-05-04
SEQ ID NO 33
SEQ ID NO 33
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
US-09-706-968-2
; Sequence 2. Application US/09706968
; Patent No. 6228050
; GENERAL INFORMATION:
; APPLICANT: Gao, Zeren
; APPLICANT: Piddington, Christopher S.
; APPLICANT: Sheppard, Paul O.
                                                                                                                                                                                                      US-09-564-595D-33
; Sequence 33, Application US/09564595D
Patent No. 3, 495668
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 99.4°
Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-564-595D-33
241
                                       241
                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                     요
                                                                              ઠે
                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRPPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                 1 MSLFGLLLTSALAGGRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LPLDLLNNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                         ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-00-723-749-2

US-00-723-749-2

Sequence 2, Application US/09723749

Patent No. 6620784

GENERAL INFORMATION:
APPLICANT: Ferrarsophia S.
TITLE OF INVENTION: POLYPEPTIDES HOMOLOGOUS TO VEGF AND BMPI
FILE REFERENCE: P1122P2D1

CURRENT FILING DATE: 2000-11-27

FRIOR PELING DATE: 1999-03-10

PRIOR PILING DATE: 1999-03-10

PRIOR PILING DATE: 1998-03-17

PRIOR FILING DATE: 1998-03-17

PRIOR FILING DATE: 1998-11-02

NUMBER OF SEQ ID NOS: 8

SEQ ID NOS: 8

SEQ ID NOS: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                       Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1851; DB 4; Length 345;
Pred. No. 8.3e-193;
2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VIKKYHEVLOLRPKIGVRGIHKSLIDVALEHHEECDCVCRGSIGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                         Indels
             APPLICANT: Gilbertson, Debra G.
APPLICANT: West, James W.
TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF3;
FILE REFERENCE: 98-60C1
CURRENT APPLICATION NUMBER: US/09/706,968
CURRENT FILING DATE: 2000-11-06
PRIOR PILING DATE: 2000-331
NUMBER OF SEQ ID NOS: 50
SOFTWARE FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                   99.6%; Score 1851; DB 4;
99.4%; Pred. No. 8.3e-193;
tive 2; Mismatches 0;
Shoemaker, Kimberly E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 99.4
Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                         Matches 343; Conservative
                                                                                                                                                                                                                                                   ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Human
US-09-723-749-2
                                                                                                                                                                                                                 LENGTH: 345
                                                                                                                                                                                                                                                                    US-09-706-968-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
LTEEVRLYSCTPRNFSVSIREELKRTDT1FWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
```

```
241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 рp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                         180
                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                    120
                                                                                      61 PRFPHTYPRNTVLVWRLVAVERNVWIQLTFDERFGLEDPEDDICKYDFVEVEVERPSDGTIL 120
                                                                                                                                     GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                            LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                               LIBEVRLYSCIPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                   241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEVEFSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PRFPHTYPRNTVLVWRLVAVERVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTEEVRLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
9
                                9
                   1 MSLFGLILITSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                         GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                              LPLDLILINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSLFGLLLLTSALAGQRQCTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LPLDLLINNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL
                                                                  PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 345;
                                                                                                                                                                                                                                                                                                                                                                    301 VTKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                  301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application US/09823033
| Sequence 2, Application US/09823033
| Patent No. 6663870
| GENERAL INFORMATION:
| APPLICANT: Hart, Charles E.
| APPLICANT: Gilbertson, Debra G.
| TITLE OF INVENTION: LIGAMENT AND CARTILAGE
| FILE REFERENCE: 00-12
| CURRENT APPLICATION NUMBER: US/09/823,033
| CURRENT FILING DATE: 2001-03-29
| NUMBER OF SEQ ID NOS: 5
| SOFTWARE: FastSEQ for Windows Version 3.0
| SEQ ID NO 2
| LENGTH: 345
| TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 99.6%; Score 1851; DB 4; Best Local Similarity 99.4%; Pred. No. 8.3e-193; Matches 343; Conservative 2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-823-033-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-823-033-2
                                                                  61
                                                                                                                                       121
                                                                                                                                                                         121
                                                                                                                                                                                                          181
                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                            원
                                                                 ò
                                                                                        음 강
                                                                                                                                                               g
                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                            쉽
                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PRFPHTYPRNTVLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVEVEFSGGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSLFGLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 VTKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                 APPLICANT: Gordon, Robert D
APPLICANT: Gordon, Robert D
APPLICANT: Sprengel, Jorg J
APPLICANT: Yon, Jeffery R
APPLICANT: Yon, Jeffery R
APPLICANT: Distans, Josiena J.H.
APPLICANT: Distans, Josiena J.H.
APPLICANT: Dhanaraj, Sridevi N
APPLICANT: Los Invention: Vascular Endorhelial Growth Factor-X
FILE REFRENCE: B0192-700110800
CURRENT APPLICATION NUMBER: US/09/468,647A
CURRENT APPLICATION NUMBER: US 809/468,647A
CURRENT PILING DATE: 1999-12-21
PRIOR APPLICATION NUMBER: US 60/124,967
PRIOR FILING DATE: 1999-11-08
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-11-08
NUMBER OF SEQ ID NOS: 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1851; DB 4;
Pred. No. 8.3e-193;
2; Mismatches 0;
                 ; Sequence 101, Application US/09468647A; Patent No. 6783953; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-468-647A-110
; Sequence 110, Application US/09468647A
; Patent No. 6783953
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sprengel, Jorg J
Yon, Jeffery R
Dijkmans, Josiena J.H.
Gosiewska, Anna
Dhanaraj, Sridevi N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin version 3.2
SEQ ID NO 101
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Gordon, Robert D
APPLICANT: Sprengel, Jorg J
APPLICANT: Yon, Jeffery R
APPLICANT: Dijkmans, Josiena
APPLICANT: Gosiewska, Anna
APPLICANT: Dhanaraj, Sridevi
APPLICANT: Nu Jean
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-468-647A-101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
JS-09-468-647A-101
```

```
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-468-647A-130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-139-583-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-139-583-2
                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LTEEVRLYSCTPRNFSVSIREELKRTDT1FWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSLFGLLLLTSALAGGRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS 60
                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSLFGLLLVTSALAGQRRGTQAESNLSSKRQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                            Query Match
99.6%; Score 1851; DB 4; Length 345;
Best Local Similarity 99.4%; Pred. No. 8.3e-193;
Matches 343; Conservative 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INCOMMAILON:
GENERAL INCOMMAILON:
GENERAL INCOMMAILON:
APPLICANT: Sprengel, Jorg J
APPLICANT: Sprengel, Jorg J
APPLICANT: Yon, Jeffeery R
APPLICANT: Dijkmans, Josiena J.H.
APPLICANT: Dijkmans, Josiena J.H.
APPLICANT: Disanaraj, Sridevi N
APPLICANT: Disanaraj, Sridevi N
APPLICANT: Xu, Jean
TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-X
FILER BERERRENCE: B0192-7001110800
CURRENT APPLICATION NUMBER: US/09/468,647A
CURRENT FILING DATE: 1999-12-21
PRIOR APPLICATION NUMBER: US 60/124,967
PRIOR PILING DATE: 1999-11-08
PRIOR FILING DATE: 1999-11-08
NUMBER OF SEQ ID NOS: 130
SOFTWARE: Patentin version 3.2
SEQ ID NO 130
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-X FILE REFERENCE: B0192.70011US00
CURRENT APPLICATION NUMBER: U5/09/468,647A
CURRENT FILING DATE: 1999-12-21
                                                                     PRIOR APPLICATION NUMBER: GB 9828377.3
PRIOR FILING DATE: 1998-12-22
PRIOR APPLICATION NUMBER: US 60/124,967
PRIOR RELIANG DATE: 1999-03-18
PRIOR RELIANG DATE: 1999-03-18
PRIOR PILING DATE: 1999-11-08
NUMBER OF SEQ ID NOS: 130
SOFTWARE: PATENTIN VEFFION 3.2
SOFTWARE: PATENTIN VEFFION 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 130, Application US/09468647A Patent No. 6783953 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                   TYPE: PRT
CORGANISM: Homo sapiens
US-09-468-647A-110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
US-09-468-647A-130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
до
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , 염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                              120
                                                                                                                                                                                                                                             61 PRFPHTYPRNTVLVWRLVAVEBNVWIQLTFDBRFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                  241 LIEEVRLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRFPHTYPRNIVLVWRLVAVEENVWIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSBPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSLFGLLLTSALAGÓRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                 61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                      GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                181 LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSLFGLLLTSALAGQRQCTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                          1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Gao, Zeren
APPLICANT: Hart, Charles E.
APPLICANT: Biddington, Christopher S.
APPLICANT: Shoemaker, Raulo.
APPLICANT: Shoemaker, Kimberly E.
APPLICANT: Shoemaker, Kimberly E.
APPLICANT: Glibertson, Debra G.
APPLICANT: Glibertson, Debra G.
APPLICANT: Glibertson, Debra G.
APPLICANT: Glibertson, Debra G.
APPLICANT: Glibertson, Debra G.
APPLICANT: BOSE, 2002-05-02
CURRENT APPLICATION NUMBER: US/10/139,583
CURRENT FLING DATE: 1999-12-07
PRIOR APPLICATION NUMBER: 09/457,066
PRIOR FILING DATE: 1999-12-07
NUMBER OF SEQ ID NOS: 50
SOFTWARE: FASELSEQ for Windows Version 3.0
INNO.2
INNO.2
                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99.6%; Score 1851; DB 4;
99.4%; Pred. No. 8.3e-193;
tive 2; Mismatches 0;
Query Match 99.6%; Score 1851; DB 4; Best Local Similarity 99.4%; Pred. No. 8.3e-193; Matches 343; Conservative 2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 2, Application US/10139583; Patent No. 6814965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
```

```
RESULT 15
US-09-468-647A-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OKGANISM: HOT
US-09-468-647A-2
                                     US-09-468-647A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                   LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                             PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRFPHTYPRNITVLVWRLVAVEENVWIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVWPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LTEEVRLYSCTPRNFSVSIREELKRTDT1FWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                          LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                             LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LPLDLIANNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSLFGLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 374;
                                                                                                                                                                                                                                                                                                                                                  GENERAL INFURMATION:

GENERAL INFURMATION:

APPLICANT: Gordon, Robert D

APPLICANT: Sprengel, Jorg J

APPLICANT: Yon, Jefferry R

APPLICANT: Yon, Jefferry R

APPLICANT: Diskmans, Josiena J.H.

APPLICANT: Gosiewska, Anna

APPLICANT: Gosiewska, Anna

APPLICANT: Wu, Jean

TILLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-X

FILE REFREENCE: B0192-700110800

FILE REFREENCE: B199-12-21

PRIOR APPLICATION NUMBER: US 9926377.3

PRIOR FILLING DATE: 1999-12-22

PRIOR FILLING DATE: 1999-11-08

PRIOR FILLING DATE: 1999-11-08

NUMBER OF SEQ ID NOS: 130

SOFTWARE: PATENTIN NUMBER: US 60/164,131

PRIOR FILLING DATE: 1999-11-08

NUMBER OF SEQ ID NOS: 130

SOFTWARE: PATENTIN VARISON 3.2

SEQ ID NO 118

LENGTH: 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                      301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 99.6%; Score 1851; DB 4;
Best Local Similarity 99.4%; Pred. No. 9.4e-193;
Matches 343; Conservative 2; Mismatches 0;
                                                                                                                                                                                                                                                                                                       Sequence 118, Application US/09468647A
Patent No. 6783953
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-468-647A-118
                                                                                                                                                                                                                                                                       RESULT 13
US-09-468-647A-118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                   181
                                                                       181
                                                                                                          241
                                                                                                                                              241
                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                 g
                                                                                                      δ
                                                                                                                                    요
                                                                                                                                                                            ò
                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                 ò
```

```
180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEFSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LIEBVRLYSCIPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSLFGLLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQYGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 LPLDLINNAITARSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VTKKYHEVLOLRPKTGVRCLHKSLTDVALEHHEBCDCVCRGSTGG 345
                                                                                                               APPLICANT: Sprengel, Jorg J
APPLICANT: You, Jeffery R
APPLICANT: You, Jeffery R
APPLICANT: You, Jeffery R
APPLICANT: Goslewska, Anna
APPLICANT: Goslewska, Anna
APPLICANT: Goslewska, Anna
APPLICANT: Bhanaraj, Sridevi N
APPLICANT: Wu, Jean
TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-X
FILE REFERENCE: B0192.70011US00
CURRENT APPLICATION NUMBER: US/09/468,647A
CURRENT FILING DATE: 1999-12-21
PRIOR APPLICATION NUMBER: US 60/124,967
PRIOR APPLICATION NUMBER: US 60/124,967
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-10-38
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-03-18
PRIOR FILING DATE: 1999-10-08
NUMBER OF SEQ ID NOS: 130
SOFTWARE: PatentIn version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Gordon, Robert D
APPLICANT: Sprengel, Jorg J
APPLICANT: You Jeffery W
APPLICANT: You Jeffery W
APPLICANT: Gosiewska, Anna
APPLICANT: Dhanaraj, Sridevi N
APPLICANT: Dhanaraj, Sridevi N
APPLICANT: Jean
TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.2%; Score 1843; DB 4;
ilarity 99.1%; Pred. No. 6.2e-192;
Conservative 2; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 103, Application US/09468647A
Patent No. 6783953
; Sequence 2, Application US/09468647A; Patent No. 6781953; Patent NorPorkArlow; APPLICANT: Gordon, Robert D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 342; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVERPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PRFPHTYPRNTVLVWMRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 LPEDLIANNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 LIEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                               1 MSLFGLLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQYGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                            1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                          .
0
                                                                                                                                                                                                                                                                                                                    Query Match 99.2%; Score 1843; DB 4; Length 345; Best Local Similarity 99.1%; Pred. No. 6.2e-192; Matches 342; Conservative 2; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: B0192.70011US00
CURRENT APPLICATION NUMBER: US/09/468,647A
CURRENT FILING DATE: 1999-12-21
FRIOR APPLICATION NUMBER: GB 9828377.3
PRIOR FILING DATE: 1998-12-22
PRIOR PILING DATE: 1999-03-18
PRIOR PILING DATE: 1999-03-18
PRIOR PILING DATE: 1999-11-08
NUMBER OF SEQ ID NOS: 130
SOFTWARE: PATENTIN VEXBION 3.2
SEQ ID NO 103
LENGTH: 345
                                                                                                                                                                                                                                             ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-468-647A-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
ფ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qo ,
                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
```

Search completed: September 3, 2005, 19:31:43 Job time : 32 secs ONEU MUNICH TUMP CIMI

ONSE BLANNK (USPTO)

Н

```
(without alignments)
1240.813 Million cell updates/sec
                                                                                                                                                                                                                                 3, 2005, 19:21:57 ; Search time 109.5 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSLFGLLLVTSALAGQRRGT......bvalehheecDcvcrgsTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Published Applications AA:*

1: /cgn2_6/ptodata/2/pubpaa/NSO7_PUBCOMB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/PCT MEW PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/NSO6_NEW PUB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/NSO6_NEW PUB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/NSO7_NEW PUB.pep:*
6: /cgn2_6/ptodata/2/pubpaa/NSO7_NEW PUB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/NSO8_NEW PUB.pep:*
8: /cgn2_6/ptodata/2/pubpaa/NSO8_NEW PUB.pep:*
9: /cgn2_6/ptodata/2/pubpaa/NSO8_NEW PUB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/NSO8_NEW PUB.pep:*
11: /cgn2_6/ptodata/2/pubpaa/NSO9_NEW PUB.pep:*
12: /cgn2_6/ptodata/2/pubpaa/NSO9_NEW PUB.pep:*
13: /cgn2_6/ptodata/2/pubpaa/NSO9_NEW PUB.pep:*
14: /cgn2_6/ptodata/2/pubpaa/NSO8_NEW PUB.pep:*
15: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
16: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
17: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
18: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/USIOF_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1774312
GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1774312 segs, 393823214 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                       - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                             US-09-818-943-1
                                Copyright
                                                                                                                                                                                                                                 September
                                                                                                                                                                                                                                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                       OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                 Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Sequence 3, Appli Sequence 3, Appli Sequence 3, Appli Sequence 7, Appli Sequence 7, Appli Sequence 4, Appli Sequence 149, Appli Sequence 32, App. Sequence 1, Appli Sequence 3, Appli Description US-10-086-623-32 US-10-260-539-32 US-10-11-600-33 US-10-303-997B-3 US-10-439-337A-7 US-09-823-995-4 US-09-795-006A-149 US-09-818-943-1 US-09-852-209A-3 Length DB Query Match 100.0 100.0 100.0 100.0 100.0 100.0 100.0 99.6 99.6 Score 110987654321 Š. Result

Sequence 488, App Sequence 488	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
000000000000000000000000000000000000000	US-09-978-80 US-09-876-81 US-09-999-83
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4 4 4
18851 18851 188551	851 99. 851 99. 851 99.
11111111111111111111111111111111111111	

ALIGNMENTS

```
APPLICANT: LI, Xuri
APPLICANT: LI, Xuri
APPLICANT: DONER, Annica
APPLICANT: POWTEN, Annica
APPLICANT: AASE, Karin
APPLICANT: LI, Hong
TITLE OF INVENTION: NON-HUMAN TRANSGENIC ANIMALS EXPRESSING PLATELET-DERIVED GROWTH F
TITLE OF INVENTION: NUMBER: US/09/818,943
CURRENT PELLING DATE: 2001-03-28
FRIOR PILING DATE: 2000-03-28
NUMBER OF SEQ ID NOS: 7
SOFTWARE: PATENTIN VERSION 3.0
SOFTWARE: PATENTIN VERSION 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 1858; DB 9; Length 345; 100.0%; Pred. No. 3.4e-174; tive 0; Mismatches 0; Indels 0
             Sequence 1, Application US/09818943
Patent No. US20020049987A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 100.
Matches 345; Conservative
                                                                               APPLICANT: ERIKSSON, Ulf
APPLICANT: LI, Xuri
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-818-943-1
US-09-818-943-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEVEPSDGTIL 120

240

300

```
GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: BRIKSSON, Ulf

APPLICANT: AASE, Karin

APPLICANT: PONTEN, Annica

APPLICANT: PONTEN, Annica

APPLICANT: UUTELA, Marko

APPLICANT: UUTELA, Marko

APPLICANT: OESTWAN, Arne

APPLICANT: HELDIN, Carl-Henrik

ITILE REFERENCE: 1064/448332C

CURRENT APPLICATION NUMBER: US/10/086,623

CURRENT APPLICATION NUMBER: US 60/13,997

FRIOR APPLICATION NUMBER: US 60/13,997

PRIOR FILING DATE: 1998-11-10

FRIOR APPLICATION NUMBER: US 60/150,604

PRIOR FILING DATE: 1999-10-04

PRIOR FILING DATE: 1999-10-04

PRIOR FILING DATE: 1999-10-05

PRIOR PELING DATE: 1999-10-05

PRIOR PELING DATE: 1999-10-05

PRIOR PELING DATE: 1999-10-05

PRIOR PELING DATE: 1999-10-05

PRIOR APPLICATION NUMBER: US 60/157,108

PRIOR PELING DATE: 1999-10-05

PRIOR APPLICATION NUMBER: US 60/157,266

PRIOR APPLICATION NUMBER: US 09/438,046

PRIOR APPLICATION NUMBER: US 09/691,200

PRIOR APPLICATION NUMBER: US 09/691,200

PRIOR PELING DATE: 1999-10-0-19
                                 61 PRFPHTYPRNTVLVWRLVAVELVWIQLTFDERFGLEDPEDDICKYDFVEVESESDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
  LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                            LTEEVRLYSCTPRNFSVSIRBELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 1858; DB 13; Length 345; 100.0%; Pred. No. 3.4e-174; ive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                    NAME/KEY: misc_feature
OTHER INFORMATION: Amino acid sequence for PDGF-C
                                                                                                                                                                                                                                                                                                                                         Sequence 32, Application US/10086623; Publication No. US20020164710A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 42
SOFWARE: Patentin version 3.1
SEQ ID NO 32
LENCTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-086-623-32
                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                     셤
                                                                                          δ
                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRWCGSGTVPCKQISKCNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                 LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                      LTEEVRLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRFPHTYPRNIVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
181 LPLDLILNNAITAFSTLEDLIRYLEPERWOLDLEDLYRPTWOLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA CODING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 345;
                                                                                                                                                                                                                                                                                                                                                VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:

APPLICANT: ENTESSON.

APPLICANT: AASE, Karin

APPLICANT: LEB, Xuri

APPLICANT: LEB, Xuri

APPLICANT: LEB, Xuri

APPLICANT: DUTELA, Marko

APPLICANT: PONTEN, Marko

APPLICANT: HELDIN, Carl-Henrik

APPLICANT: BETSHOLTZ, Christer

APPLICANT: BETSHOLTZ, Christer

APPLICANT: BETSHOLTZ, Christer

TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR C, DI

TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR C, DI

TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR C, DI

TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR C, DI

TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR C, DI

TITLE OF INVENTION UNMBER: 09/410,349

FRIOR PELLING DATE: 1999-09-10

FRIOR APPLICATION NUMBER: 60/113,002

FRIOR APPLICATION NUMBER: 60/113,002

FRIOR APPLICATION NUMBER: 60/113,002

FRIOR PILING DATE: 1999-05-21

FRIOR PILING DATE: 1999-05-21

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15

FRIOR PILING DATE: 1999-07-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.0%; Score 1858; DB 9;
Best Local Similarity 100.0%; Pred. No. 3.4e-174;
Matches 345; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 3, Application US/09852209A; Patent No. US20020164687A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-852-209A-3
                                                                    121
                                                                                                                    121
                                                                                                                                                                 181
                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                            61
                                                                                                             a
                                                                                                                                                            ò
                                                                                                                                                                                                g
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                  ò
                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
```

Db 181 LPLDLLMNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240 Qy 241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300	RESULT 5 US-10-131-600-3 Sequence 3, Application US/10131600 Publication No. US20030082670A1 GENERAL INFORMATION: APPLICANT AREX Karin APPLICANT ABLE KARIN APPLICANT BERKESON, UIF APPLICANT UUTELA, MATKO APPLICANT OBSTRAM, ATTO APPLICANT OBSTRAM, ATTO APPLICANT BETSHOLY, CATI-Henrik APPLICANT OBSTRAM, ATTO APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT BETSHOLY, CATI-HENRY APPLICANT WINGER: 109-101349 FRICE RILING DATE: 1999-04-125 PRIOR PILING DATE: 1999-04-13 PRIOR PILING DATE: 1999-12-13 PRIOR PILING DATE: 1999-12-14 PRIOR PILING DATE: 1999-12-14 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-16 PRIOR PILING DATE: 1999-12-15 PRIOR PI	Query Match 100.0%; Score 1858; DB 14; Length 345; Best Local Similarity 100.0%; Pred. No. 3.4e-174; O; Gaps 0; Matches 345; Conservative 0; Mismatches 0; O; Qy IMSLFGLLLVTSALAGQRRGTQAESNLSSKPQPSSNKEQNGVQDPQHERIITVSTNGSIHS 60 O; Db IMSLFGLLLVTSALAGQRRGTQAESNLSSKPQPSSNKEQNGVQDPQHERIITVSTNGSIHS 60 Qy 61 PRFPHTYPRNTVLVWRLVAVEENVUQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120 Db 61 PRFPHTYPRNTVLVWRLVAVEENVUQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120 Qy 121 GRWCGSGTVDGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVWPQFTEAVSPSVLPPSA 180 Db 121 GRWCGSGTVDGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVWPQFTEAVSPSVLPPSA 180 Qy 181 LPLDLLANNAITAFSTLEDLIRYLEPERWQLDLEDLYRFTWQLLGKRFVFGRKSRVVDLNL 240 Qy 181 LPLDLLANAITAFSTLEDLIRYLEPERWQLDLEDLYRFTWQLLGKRFVFGRKSRVVDLNL 240 Qy 181 LPLDLLANAITAFSTLEDLIRYLEPERWQLDLEDLYRFTWQLLGKRFVFGRKSRVVDLNL 240 Qy 121 LTEBVRLYSCTPRIRESURFTWGLGCACCCCACACCCHNCNECQCVPSK 300 Db 221 LTEBVRLYSCTPRIRESURFTWDTIFWPGCLLVKRCGCACACCCHNCNECCCCHNCNECCCHNCNECCCHNCNECCCHNCNECCCHNCNECCCHNCNCNER 300
Db 181 LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240 Qy 241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300	RESULT 4 US-10-260-539-32 Sequence 3.2 Application US/10260539 Publication No. U520030073637A1 Fublication No. U520030073637A1 Fublication No. U520030073637A1 Fublication No. U520030073637A1 APPLICANT: RASE, Karin APPLICANT: AASE, Karin APPLICANT: UUTELA, Marko APPLICANT: UUTELA, Marko APPLICANT: UUTELA, Marko APPLICANT: UUTELA, Marko APPLICANT: UUTELA, Marko APPLICANT: UUTELA, Marko APPLICANT: UUTELA, Marko APPLICANT: UUTELA, Marko APPLICANT: HELDIN, CA-1-Henrik APPLICANT: UUTENIO, PLATELE DERIVED GROWTH FACTOR D, DNA CODING THEREFOR AND USES TH FILE REFERENCE: 1064/44833C2 CURRENT APPLICANTON NUMBER: US/10/260,539 CURRENT PLILNG DATE: 1999-10-01 PRIOR PRILNG DATE: 1999-10-04 PRIOR PLILNG DATE: 1999-10-04 PRIOR PLILNG DATE: 1999-10-05 PRIOR PLILNG DATE: 1999-10-05 PRIOR PLILNG DATE: 1999-10-05 PRIOR PLILNG DATE: 1999-10-05 PRIOR PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLILNG DATE: 1999-11-10 PLIL	ORGANISM: Homo sapiens PEARTURE: NAME/KEY: misc_feature COTHER INFORMATION: Amino acid sequence for PDGF-C US-10-260-539-32 Query Match COTHER INFORMATION: Amino acid sequence for PDGF-C US-10-260-539-32 Query Match Best Local Similarity 100.0%; Pred. No. 3.4e-174; MATCHES 345; CONSERVATION: Amino acid sequence for PDGF-C ON

```
APPLICANT: LI, Xuri
APPLICANT: ERIKSSON, Ulf
APPLICANT: ERIKSSON, Ulf
APPLICANT: CANELLEY, Peter
APPLICANT: CANELLEY, Peter
APPLICANT: CANELLEY, Peter
APPLICANT: CANELLEY, Peter
TITLE OF INVENTION: COMPOSITION AND METHOD FOR MODULATING VASCULOGENESIS AND
TITLE OF INVENTION: ANGIOGENESIS
FILE REFERENCE: 029065.44740C4
CURRENT APPLICATION NUMBER: US/10/439,337A
CURRENT APPLICATION NUMBER: US 10/303,997
PRIOR FILING DATE: 1999-09-30
PRIOR FILING DATE: 1999-09-30
PRIOR FILING DATE: 1999-09-30
PRIOR FILING DATE: 1998-09-30
PRIOR FILING DATE: 1998-11-12
PRIOR PLICATION NUMBER: US 60/108,109
PRIOR FILING DATE: 1998-11-12
PRIOR PLICATION NUMBER: US 60/113,002
PRIOR FILING DATE: 1999-12-03
PRIOR FILING DATE: 1999-05-21
PRIOR FILING DATE: 1999-05-21
PRIOR FILING DATE: 1999-05-21
PRIOR FILING DATE: 1999-05-21
PRIOR FILING DATE: 1999-05-21
PRIOR FILING DATE: 1999-05-21
PRIOR FILING DATE: 1999-05-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PREPHTYPRNIVLVWRLVAVEENVWIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PRFPHTYPRNTVLVWRLVAVEENVWIQL/FDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGXAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LPLDCLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LTEEVRLYSCTPRNFSVSIRBELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 LIEEVRLYSCTPRNFSVSIRBELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSLFGLLLVTSALAGQRRCTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Application US/10772927A
Publication No. US20040248796A1
GENERAL INFORMATION: VESTOR APPLICANT: Alitalo, et al.
TITLE OF INVENTION: VEST-B AND PDGF MODULATION OF STEM CELLS
FILE REFERENCE: 28867/39140B
CURRENT APPLICATION NUMBER: US/10/772,927A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VIKKYHEVIQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 1858; DB 15;
100.0%; Pred. No. 3.4e-174;
ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn version 3.2 SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) ORGANISM: Homo sapiens US-10-439-337A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 8
US-10-772-927A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 345
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                      US-10-303-99/B-3

Sequence 3, Application US/1030397B

Sequence 3, Application US/1030397B

Sequence 3, Application US/103021994A1

GENERAL INFORMATION:

APPLICANT: LIX. Xuzi

APPLICANT: CARMELIET, Peter

APPLICANT: CARMELIET, Peter

APPLICANT: CARMELIET, Peter

APPLICANT: CARMELIET, Peter

APPLICANT: CARMELIET, Peter

APPLICANT: CARMELIET, Peter

APPLICANT: CARMELIET, Peter

APPLICANT: CAMPOSITION AND METHOD FOR MODULATING VASCULOGENESIS AND ANGIOGEN

FILE REFERENCE: 202065.44740C3

CURRENT APPLICATION NUMBER: US 09/410,349

PRIOR PILING DATE: 199-0-03-30

PRIOR PLING DATE: 199-0-03-30

PRIOR PLING DATE: 199-0-03-30

PRIOR PLING DATE: 199-112-13

PRIOR PLING DATE: 199-112-13

PRIOR PLING DATE: 199-112-13

PRIOR PLING DATE: 1999-12-13

PRIOR PLING DATE: 1999-05-21

PRIOR PLING DATE: 1999-05-21

PRIOR PLING DATE: 1999-07-15

PRIOR PLING DATE: 1999-07-15

PRIOR PLING DATE: 1999-07-15

PRIOR PLING DATE: 1999-07-15

PRIOR PLING DATE: 1999-07-15

NUMBER OF SEQ ID NOS: 40

SECTUMENT PRIOR PLING DATE: 1999-07-15

NUMBER OF SECTUMENT PRIOR PLING DATE: 1999-07-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300 241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 1858; DB 15; Length 345; Best Local Similarity 100.0%; Pred. No. 3.4e-174; Matches 345; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                       301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-439-337A-3
; Sequence 3, Application US/10439337A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens
                                                                                                                                        US-10-303-997B-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-303-997B-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 3
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
ò
                                        g
```

ö

```
LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                   241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PRFPHTYPRNTVLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 LTEEVRLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                       1 MSLFGLLLITSALAGQRQCTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                   345
                                                                                                                                                                                                                                                                                                                                                                                               301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 VIKKYHEVLOLRPKIGVRGLHKSLIDVALEHHEECDCVCRGSIGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                   VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1851; DB 9;
Pred. No. 1.6e-173;
2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Sheppard, Paul O.
TITLE OF INVENTION: SNAKE VENOM POLYPEPTIDE ZSNK1
FILE REFERENCE: 00.47
CURRENT APPLICATION NUMBER: US/09/923,995
CURRENT FILING DATE: 2001-08-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 60/223,164
PRIOR FILING DATE: 2000-08-07
NUMBER OF SEQ ID NOS: 7
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
US-09-795-006A-149
Sequence 149, Application US/09795006A
Patent No. US20020151680A1
GENERAL INFORMATION:
APPLICANT: Alitalo et al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application US/09923995; Patent No. US20020081700A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 99.4%;
Matches 343; Conservative 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-923-995-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                181
                                       121
                                                                            셤
                                                                                                                                              ò
                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                       ઢ
                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LPLDLIANAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRFPHTYPRNTVLVWRLVAVGENVWIQLTFDERFGLEDPEDDICKYDFVEVEGEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
0
                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 1858; DB 16; Length 345; 100.0%; Pred. No. 3.4e-174; ive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Sequence 2, Application US/09823033; Patent No. US20020004225A1; Patent No. US20020004225A1; GENERAL INFORMATION:
; APPLICANT: Hart Charles E.; APPLICANT: Gilbertson, Debra G.; TITLE OF INVENTION: METHODS FOR PROMOTING GROWTH OF BONE; TITLE OF INVENTION: LIGAMENT AND CARTILAGE; FILE REPERENCE: 00-12 CURRENT FILING DATE: 2001-03-29; CURRENT FILING DATE: 2001-03-29; NUMBER OF SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SEQ ID NOS: 5; SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VIKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
99.6%; Score 1851; DB 9;
Best Local Similarity 99.4%; Pred. No. 1.6e-173;
Matches 343; Conservative 2; Mismatches 0;
CURRENT FILING DATE: 2004-02-04
PRIOR APPLICATION NUMBER: US 60/445,021
PRIOR PILING DATE: 2000-02-04
PRIOR PILING DATE: 2003-05-16
NUMBER OF SEQ ID NOS: 30
SOFTWARE: PatentIn version 3.2
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                          US-10-772-927A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-823-033-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
```

180

9 9

Gaps

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GRWCGSGTVPGKQISKGNQIRIRFVSDBYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 LPLDLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEFSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSLFGLLLLTSALAGQRQCTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LPLDLLNNA!TAFSTLEDL!RYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
TITLE OF INVENTION: MATERIALS AND METHODS INVOLVING HYBRID VASCULAR TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR DNAS AND PROTEINS FILE REFERENCE: 28967/359779 CURRENT APPLICATION NUMBER: US/09/795,006A CURRENT FILING DATE: 2001-02-26 PRIOR APPLICATION NUMBER: US 60/205,331 PRIOR APPLICATION NUMBER: US 60/205,331 PRIOR PILING DATE: 2000-05-18 PRIOR PILING DATE: 2000-02-25 NUMBER OF SEQ ID NOS: 175 SOFTWARE: PATENTH VEY. 2.0 SEQ ID NO 149 LENTH: 345
                                                                                                                                                                                                                                                                                                                                                               Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                             99.6%; Score 1851; DB 9;
99.4%; Pred. No. 1.6e-173;
iive 2; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gao, Wal-Qiang
Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 488, Application US/09978295A
Patent No. US20020156006A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Paoni, Nicholas F.
Roy, Margaret Ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ferrara, Napoleon
Filvaroff, Ellen
Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Botstein, David
Desnoyers, Luc
Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kljavin, Ivar J.
Kuo, Sophia S.
                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 99.4
Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker Kevin P.
                                                                                                                                                                                                                                                                           TYPE: PRT; ORGANISM: Homo sapiens
US-09-795-006A-149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
US-09-978-295A-488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

```
APPLICANT: Steadt., Timothy A. APPLICANT: Steadt., Timothy A. APPLICANT: Steadt., Timothy A. APPLICANT: Milliams, Daniel G. Milliams, P. Mickey APPLICANT: Williams, P. Mickey APPLICANT: Milliams, P. Mickey APPLICANTON WINGER: 00/104230 MRIOR PRINCE APPLICANTON WINGER: 00/104230 MRIOR PRINCE APPLICANTON WINGER: 00/104230 MRIOR PRINCE APPLICANTON WINGER: 00/104230 MRIOR PRINCE APPLICANTON WINGER: 00/104230 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE APPLICANTON WINGER: 00/107321 MRIOR PRINCE WINGER: 00/107321 MRIOR PRINCE WINGER: 00/107321 MRIOR PRINCE WINGER: 00/107321 MRIOR PRINCE WINGER: 00/107321 MRIOR PRINCE WINGER: 00/107331 MRIOR PRINCE WINGER: 00/107331 MRIOR PRINCE WINGER: 00/
```

```
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION WURBER: 60/081070
PRIOR PLILING DATE: 1998-04-08
PRIOR PLILING DATE: 1998-04-09
PRIOR PLILING DATE: 1998-04-09
PRIOR PLILING DATE: 1998-04-09
PRIOR PLILING DATE: 1998-04-09
PRIOR PLILING DATE: 1998-04-09
PRIOR PLILING DATE: 1998-04-09
PRIOR PLILING DATE: 1998-04-09
PRIOR PLILING DATE: 1998-04-09
PRIOR PLILING DATE: 1998-04-05
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-15
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-22
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04-29
PRIOR PLILING DATE: 1998-04
```

PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120 121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSBPGFCIHYNIVMPQFTEAVSPSVLPPSA 180 LTEBVRLYSCTPRNFSVSIRBELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300 241 LIEEVRLYSCTPRNFSVSIRBELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300 1 MSLFGLLLISALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS 191 LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS ö Length 345; 301 VTKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345 301 VIKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345 Indels 99.6%; Score 1851; DB 9; 99.4%; Pred. No. 1.6e-173; ive 2; Mismatches 0; PRIOR APPLICATION NUMBER: 60/084598
PRIOR FILING DATE: 1998-05-07
PRIOR PELLING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084643
PRIOR PELLING DATE: 1998-05-13
PRIOR PELLING DATE: 1998-05-13
PRIOR PELLING DATE: 1998-05-13
PRIOR PELLING DATE: 1998-05-13
PRIOR APPLICATION NUMBER: 60/085323
PRIOR PELLING DATE: 1998-05-13
PRIOR PELLING DATE: 1998-05-13
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15
PRIOR PELLING DATE: 1998-05-15 Sequence 488, Application US/09978697 Patent No. US20020169284A1 GENERAL INFORMATION: APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Baker Kevin P.
APPLICANT: Betstein, David
APPLICANT: Besnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Fong, Sherman
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang Conservative Similarity RESULT 13 US-09-978-697-488 Matches 343; 61 61 241 Query Match Best Local 셤 g 셤 ઠે ò ઠે 셤 ઠે ò ઠ

9

```
PRIOR APPLICATION NUMBER: 60/080107
PRIOR FILING DATE: 1998-03-11
PRIOR FILING DATE: 1998-03-11
PRIOR FILING DATE: 1998-03-11
PRIOR FILING DATE: 1998-03-11
PRIOR FILING DATE: 1998-03-11
PRIOR PLING DATE: 1998-03-11
PRIOR PLING DATE: 1998-03-11
PRIOR PLING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/08033
PRIOR PLING DATE: 1998-04-01
PRIOR PLING DATE: 1998-04-01
PRIOR PLING DATE: 1998-04-01
PRIOR PLING DATE: 1998-04-01
PRIOR PLING DATE: 1998-04-01
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-06
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-15
PRIOR PLING DATE: 1998-04-22
PRIOR PLING DATE: 1998-04-22
PRIOR PLING DATE: 1998-04-22
PRIOR PLING DATE: 1998-04-22
PRIOR PLING DATE: 1998-04-22
PRIOR PLING DATE: 1998-04-22
PRIOR PLING DATE: 1998-04-22
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-29
PRIOR PLING DATE: 1998-04-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and Transmembrane Polypeptides and Nucleic
                                                                                                                                                                                                                                                                                                                                         APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630PIC27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT FILING DATE: 2001-10-16
PRIOR PELICATION NUMBER: US/09/978,697
CURRENT FILING DATE: 2001-10-16
PRIOR PLILING DATE: 2001-07-30
PRIOR PLILING DATE: 2001-07-30
PRIOR PLILING DATE: 1997-11-13
PRIOR PLILING DATE: 1997-11-03
PRIOR PLILING DATE: 1997-11-03
PRIOR PLILING DATE: 1997-11-03
PRIOR PLILING DATE: 1997-11-13
PRIOR PLILING DATE: 1997-11-13
PRIOR PLILING DATE: 1997-11-13
PRIOR PLILING DATE: 1997-11-13
PRIOR PLILING DATE: 1998-03-10
PRIOR PLILING DATE: 1998-03-10
PRIOR PLILING DATE: 1998-03-11
PRIOR PLILING DATE: 1998-03-11
PRIOR PLILING DATE: 1998-03-12
PRIOR PLILING DATE: 1998-03-13
PRIOR PLILING DATE: 1998-03-13
PRIOR PLILING DATE: 1998-03-13
PRIOR PLILING DATE: 1998-03-13
PRIOR PLILING DATE: 1998-03-13
PRIOR PLILING DATE: 1998-03-13
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-20
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PLILING DATE: 1998-03-27
PRIOR PRILING DATE: 1998-03-27
PRIOR PRILING DATE: 1998-03-27
PRIOR PRILING DATE: 1998-03-27
PRIOR PRILING DATE: 1998-03-330
         Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-03-30
APPLICATION NUMBER: 60/080105
FILING DATE: 1998-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/079923
                                                                                                                                                                                                                                   Kljavin, Ivar J.
Kuo, Sophia S.
Napier, Mary A.
Pan, James;
                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                            APPLICANT
```

```
488, Application US/09978192A
                                                                  GENERAL INFORMATION:
US-09-978-192A-488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PRFPHTYPRNTVLVWRLVAVEENVWIQLIFDERFGLEDPEDDICKYDFVEVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LIEEVRLYSCIPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LPLDLIANNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSLFGLLLTSALAGQRQCTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PRFPHTYPRNTVLVMRLVAVEENVWIQLTFDERPGLEDPEDDICKYDFVEVEPEPSDGTIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99.6%; Score 1851; DB 9;
99.4%; Pred. No. 1.6e-173;
live 2; Mismatches 0;
              PRIOR APPLICATION NUMBER: 60/084366
PRIOR PILING DATE: 1998-05-05
PRIOR PLING DATE: 1998-05-05
PRIOR PLING DATE: 1998-05-06
PRIOR PLING DATE: 1998-05-06
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084639
PRIOR PLING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084639
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-07
PRIOR PLING DATE: 1998-05-13
PRIOR PLING DATE: 1998-05-13
PRIOR PLING DATE: 1998-05-13
PRIOR PLING DATE: 1998-05-13
PRIOR PLING DATE: 1998-05-13
PRIOR PLING DATE: 1998-05-13
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
PRIOR PLING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697
FILING DATE: 1998-04-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 99.4
Matches 343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REPERENCE: P2630PIC9
CURRENT APPLICATION WUBBE: US/09/978,192A CURRENT FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR APPLICATION NUMBER: 09/918585
PRIOR APPLICATION NUMBER: 00/064249
PRIOR PILING DATE: 1997-10-17
PRIOR PELING DATE: 1997-11-03
PRIOR FILING DATE: 1997-11-13
PRIOR PILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/065311
PRIOR PILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/077450
PRIOR PILING DATE: 1998-03-10
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20 Goddard, Audrey Godowski, Paul J. Grimaldi, J. Christopher Gurney, Austin L. Nagro., Pan, James, Paoni, Nicholas F. Roy, Margaret Ann Shelton, David L. Srewart, Timothy A. Gao, Wei-Qiang Gerber, Hanspeter Gerritsen, Mary E. Hillan, Kenneth J Kljavin, Ivar J. Kuo, Sophia S. Ferrara, Napoleon Filvaroff, Ellen APPLICANT: Ashkenazi, Avi APPLICANT: Baker Kevin P. APPLICANT: Botstein, David APPLICANT: Desnoyers, Luc Napier, Mary A. Fong, Sherman

> 14 RESULT

1998-03-27 1998-03-27 1998-03-27 NUMBER: 60/0797 NUMBER: 60/0797 1998-03-27 NUMBER: 60/0799 1998-03-30 NUMBER: 60/0799 1998-03-30 NUMBER: 60/0801 1998-03-31 NUMBER: 60/0801 1998-03-31 NUMBER: 60/0801 1998-03-31 NUMBER: 60/0801	1998-0. 1998-0. 1998-0. 1998-0. 1998-0. 1998-0. 1998-0. NUMBER: 1998-0. NUMBER: 1998-0. NUMBER: 1998-0. NUMBER: 1998-0. NUMBER: 1998-0. NUMBER:	NUMBER: 60/08122 1998-04-09 1908-04-15 1908-04-15 NUMBER: 60/08181 1998-04-15 NUMBER: 60/08195 1998-04-15 NUMBER: 60/08193 1998-04-15 NUMBER: 60/08183 1998-04-15 NUMBER: 60/08256 1998-04-21 NUMBER: 60/08256 1998-04-21 NUMBER: 60/08256	NUWHER: 60/092804 1998-04-22 NUMBER: 60/082700 1998-04-22 NUMBER: 60/082796 1998-04-23 NUMBER: 60/08336 1998-04-27 NUMBER: 60/08332 1998-04-27 NUMBER: 60/08332 1998-04-27 NUMBER: 60/08332 1998-04-29 NUMBER: 60/08332 1998-04-29 NUMBER: 60/08332
LING DATE: PLICATION LING DATE: LING DATE: LING DATE: PLICATION LING DATE: PLICATION LING DATE: PLICATION LING DATE: PLICATION LING DATE: PLICATION LING DATE: PLICATION LING DATE: PLICATION LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE: LING DATE:	PPLICATION ILLING DATE: PPLICA	PPLICATION ILING DATE: ILING DATE: ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE: PPLICATION ILING DATE:	APPLICATION FILING DATE: APPLICATION APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE:
	PRIOR PRIOR		PRIOR PRIOR
	•		

61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEVEEPSDGTIL 120 181 IPLDLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL 240 MSLFGLLLLTSALAGGRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEREPSDGTIL GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS Gaps .; 0 Length 345; Indels Score 1851; DB 9; Pred. No. 1.6e-173; 2; Mismatches 0; APPLICATION NUMBER: 60/083545

RAPPLICATION NUMBER: 60/083545

RAPPLICATION NUMBER: 60/083545

RAPPLICATION NUMBER: 60/083549

RAPPLICATION NUMBER: 60/08359

RAPPLICATION NUMBER: 60/08359

RAPPLICATION NUMBER: 60/08359

RAPPLICATION NUMBER: 60/08350

RAPPLICATION NUMBER: 60/08350

RAPPLICATION NUMBER: 60/083412

RAPPLICATION NUMBER: 60/084414

RELING DATE: 1998-04-29

RAPPLICATION NUMBER: 60/084414

RELING DATE: 1998-05-05

RAPPLICATION NUMBER: 60/084414

RELING DATE: 1998-05-07

RAPPLICATION NUMBER: 60/084640

RAPPLICATION NUMBER: 60/084640

RELING DATE: 1998-05-07

RAPPLICATION NUMBER: 60/084640

RELING DATE: 1998-05-07

RAPPLICATION NUMBER: 60/084639

RELING DATE: 1998-05-07

RAPPLICATION NUMBER: 60/084639

RELING DATE: 1998-05-07

RAPPLICATION NUMBER: 60/084639

RELING DATE: 1998-05-07

RAPPLICATION NUMBER: 60/085339

RELING DATE: 1998-05-07

RAPPLICATION NUMBER: 60/085339

RELING DATE: 1998-05-07

RAPPLICATION NUMBER: 60/085339

RELING DATE: 1998-05-13

RAPPLICATION NUMBER: 60/085339

RELING DATE: 1998-05-13

RAPPLICATION NUMBER: 60/085530

RAPPLICATION NUMBER: 60/085530

RELING DATE: 1998-05-15

RAPPLICATION NUMBER: 60/085530

RELING DATE: 1998-05-15

RAPPLICATION NUMBER: 60/085530

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: 1998-05-15

RELING DATE: Query Match
Best Local Similarity 99.4%;
Matches 343; Conservative 2 н н 121 61 PRICE g ò g ઠે qq ò ठ

180

셤 ò ద

```
PRIOR APPLICATION NUMBER: 60/078936
PRIOR FILING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-20
PRIOR PELLING DATE: 1998-03-20
PRIOR PELLING DATE: 1998-03-20
PRIOR PILING DATE: 1998-03-25
PRIOR PELLING DATE: 1998-03-27
PRIOR PELLING DATE: 1998-03-27
PRIOR PELLING DATE: 1998-03-27
PRIOR PELLING DATE: 1998-03-27
PRIOR PELLING DATE: 1998-03-27
PRIOR PELLING DATE: 1998-03-27
PRIOR PELLING DATE: 1998-03-27
PRIOR PELLING DATE: 1998-03-37
PRIOR PELLING DATE: 1998-03-37
PRIOR PELLING DATE: 1998-03-37
PRIOR PELLING DATE: 1998-03-37
PRIOR PELLING DATE: 1998-03-37
PRIOR PELLING DATE: 1998-03-37
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-04-01
PRIOR PELLING DATE: 1998-04-01
PRIOR PELLING DATE: 1998-04-01
PRIOR PELLING DATE: 1998-04-01
PRIOR PELLING DATE: 1998-04-01
PRIOR PELLING DATE: 1998-04-01
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-04-22
APPLICATION NUMBER: 60/082700
FILING DATE: 1998-04-22
APPLICATION NUMBER: 60/082797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/081838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/081819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/081952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/082568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/082569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-04-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-04-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  998-04-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
PRIOR
241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                            241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Pan, James;
APPLICANT: Pan, James;
APPLICANT: Pani, Nicholas F.
APPLICANT: Roy, Margatet Ann
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Tumas, Daniel
APPLICANT: Wood, William I.
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                       301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                              301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE KEFEKENEE: PESSIPLICS;
CURRENT PEPLICATION NUMBER: US/09/99,832A
CURRENT PILING DATE: 2001-10-24
PRIOR APPLICATION NUMBER: 09/918865
PRIOR PILING DATE: 2001-07-30
PRIOR PILING DATE: 1997-10-17
PRIOR PELING DATE: 1997-10-17
PRIOR PILING DATE: 1997-11-03
PRIOR PILING DATE: 1997-11-03
PRIOR PILING DATE: 1997-11-13
PRIOR PILING DATE: 1997-11-13
PRIOR PILING DATE: 1997-11-21
PRIOR PILING DATE: 1997-11-21
PRIOR PILING DATE: 1997-11-21
PRIOR PILING DATE: 1998-03-10
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-11
PRIOR PILING DATE: 1998-03-12
PRIOR PILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 60/077649
PRIOR PILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 60/077791
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 488, Application US/0999832A
Publication No. US20020192706A1
GENERAL INFORMATION:
APPLICANT: Baker Kevin P.
APPLICANT: Betein, David
APPLICANT: Betein, David
APPLICANT: Beton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ferrara, Napoleon
Filvaroff, Ellen
Fong, Sherman
Gao, Wei-Qiang
Gerber, Hanspeter
Gerritsen, Mary B.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PILING DATE: 1998-03-12
APPLICATION NUMBER: 60/078004
FILING DATE: 1998-03-13
APPLICATION NUMBER: 60/078886
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hillan, Kenneth J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kljavin, Ivar J.
Kuo, Sophia S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                    RESULT 15
US-09-999-832A-488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
                                                                                                                                               셤
                                                                                                                                                                                                       ò
```

. .

```
PRIOR FILING DATE: 1998-04-22

PRIOR FILING DATE: 1998-04-23

PRIOR FILING DATE: 1998-04-23

PRIOR FILING DATE: 1998-04-23

PRIOR FILING DATE: 1998-04-23

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR FILING DATE: 1998-04-29

PRIOR PRIOR FILING DATE: 1998-04-29

PRIOR PRIOR FILING DATE: 1998-04-29

PRIOR PRIOR PRIOR INVERS: 60/08359

PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-04-29

PRIOR PRIOR PRIOR DATE: 1998-05-06

PRIOR PRIOR PRIOR DATE: 1998-05-06

PRIOR PRIOR PRIOR DATE: 1998-05-06

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-07

PRIOR PRIOR PRIOR DATE: 1998-05-17

PRIOR PRIOR
```

ö

0; Gaps

99.6%; Score 1851; DB 9; Length 345; 99.4%; Pred. No. 1.6e-173; ive 2; Mismatches 0; Indels

Query Match Best Local Similarity 99.4 Matches 343; Conservative

240 240 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120 LIBEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300 241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300 9 9 LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345 241 301 301 61 181 Н Н 61 a ò 셤 8 8 g g ò à ò

Search completed: September 3, 2005, 19:35:28 Job time : 111.5 secs

```
WPI; 2000-292954/25.
N-PSDB; AAA12525.
WO200018212-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-NOV-1998;
03-DEC-1998;
18-DEC-1998;
21-MAY-1999;
15-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                          25-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eriksson U,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oestman A,
11667
116667
116667
116667
116667
11667
11667
11667
11667
11667
11667
                                                                                                                                                                                                                                                                                                                                                                                               AAY84559;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gb.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus
                                                                                                                                                                                                                                                                                                                                                       AAY84559
Mouse zve
Mouse zve
Mouse zve
Human PRO
Human VGS
Human PRO
Human PRO
Human PRO
Human PRO
Human WGG
Human WGG
Human WGG
Human WGG
Human WGG
Human WGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             zve
ZVE
gro
                                                                                         9; Search time 118.5 Seconds (without alignments) 1126.011 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Murine va
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                number of results predicted by chance to have a un or equal to the score of the result being printed, analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse 2
Mouse 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouse
                                                                                                                                                                       MLLLGLLLTSALAGQRTGT.....DVALEHHEECDCVCRGNAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aay96861
Aab48658
Aab49858
Aab47890
Aab47890
Aab47890
Adj37789
Adj37789
Adj37789
Adj37789
Adj37789
Adj37789
Adj37789
Adj37789
Adj37789
Adj37789
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
Adj3779
                                                                                                                                                                                                                                                                        2105692
         5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                           2105692 segs, 386760381 residues
           version :
                                                                                         3, 2005, 19:08:39
                                                                                                                                                                                                                                                                                                                                      Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                               sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE13213
AAB47890
ABU72435
ABG76398
ADG47752
ADU32788
ADL18359
AAY41766
AAY30023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB33414
AAB19578
AAB10651
AAB10650
AAB10650
AAB10644
AAB4412
AAB24412
AAB24412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY84559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABG92894
                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 , Gapext 0.5
           GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                          geneseqp19808:*
geneseqp19908:*
geneseqp20018:*
geneseqp20018:*
geneseqp2003as:*
geneseqp2003as:*
                                                                                                                                                                                                                                                                                                                                                                                               Geneseq 16Dec04:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of ree score greater than or equal to and is derived by analysis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         geneseqp2004s:*
                                                              protein search, using
                                                                                                                                                                                                                                                                                                length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                              US-09-818-943-2
1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                        Copyright
                                                                                         September
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ..........
                                                                                                                                                                                                                                                                                                                                         Post-processing:
                                                                                                                                                                                                                                                                                                 seq
seq
                                                                                                                                                          Perfect score:
                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1848
11848
11848
11848
11848
11848
11848
11864
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
11667
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
1167
                                                              OM protein
                                                                                                                                                                                                                                                                                                 88
                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                Minimum I
Maximum I
                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
```

```
Human gro
Human Zve
Human TAN
Human Dla
Human DRO
Human And
Human And
Human VEG
Human Zve
Poolypepti
Human PRO
                                                                             Human Zve
Human VEG
Human Zve
Human Zve
                                                                                                               Human
Novel
                                                                                                                            Human
      Aab48657
Aab214250
Aac214250
Aac21649
Aab412314
Aab74028
Aab69860
Aab699860
Aac609997
Abb79984
Abb79984
Abb79984
Abb73988
Abb73889
Abb73889
Abb73889
Abb73889
Abb73889
AAY96858

AAB48657

AAB28250

AAB24250

AAB24250

AAB23074

AAB12114

AAB13008665

AAB50880

AAB50880

AAB50880

AAB50880

AAB50880

AAB50880

AAB50880

AAB50880

AAB50880

AAB50880
```

ALIGNMENTS

```
Novel DNA encoding PDGF-C useful to stimulate or enhance proliferation, differentiation, growth and motility of cells expressing the PDGF-C
                                                                                  Platelet-derived growth factor C; PDGF-C; cell proliferation; growth factor; heparin; connective tissue; wound healing; VBGF-F; fibroplast mitogenesis; PDGF alpha receptor activation; tumour growth; choriocarcinoma; Wilms tumour; megakaryoblastic leukaemia; lung carcinoma; erythroleukemia; tissue remodelling.
                                                                                                                                                                                                                                                                                                                                                ĸ,
                                                                                                                                                                                                                                                                                                                                                 Alitalo
                                                                A murine platelet-derived growth factor C (PDGF-C)
                                                                                                                                                                                                                                                                                                                                                 Uutela M,
                                                                                                                                                                                                                                                                                                                                               Lee X, Ponten A,
Betsholz C;
                                                                                                                                                                                                                                                                                                                 (LUDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD.
AAY84559 standard; protein; 345 AA
                                                                                                                                                                                                                                     98US-0102461P.
98US-0108109P.
98US-0110749P.
99US-0113002P.
99US-0135426P.
                                                                                                                                                                                                                   99WO-US022668
                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                Aase K,
Heldin C,
```

The present sequence represents murine platelet-derived growth factor C (PDGF-C) (formally designated VBGF-F). PDGF-C polypeptides have the

Claim 27; Fig 6; 135pp; English.

```
proliferation, preferably in combination with one other growth factor and heparin. Pharmaceuticals comprising PDGF-C polypeptides can also be used for stimularing connective tissue or wound healing. The PDGF-C polypeptide can be enzymatically processed to generate the active truncated form of PDGF-C and used to regulate the receptor-binding specificity of POGF-C. PDGF-C and also be used to promote flibroblast mitogenesis in a mammal and to induce PDGF alpha receptor activation. PDGF-C antagonists can be used to inhibit tumour growth of a tumour correctioned. Wilms tumour, megakaryoblastic leukaemia, lung carcinoma and erythroteukemia, can be identified by testing for expression of PDGF-C antagonists can also be used to inhibit tissue remodelling during invasion of tumour cells into a normal population of cells. Antagonists can also be used to inhibit tissue remodelling for under the lung, kidney or liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GRWCGSGTVPGKOTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPOVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
  to stimulate and enhance proliferation or differentiation, and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MILLGLLLTSALAGORTCTRAESNLSSKLOLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vascular endothelial growth factor; homologue; zvegf3; CUB domain; Cysteine knot; platelet-derived growth factor; pDGF; neuropilin; chromosome 4q28.3; cytostatic; anti-inflammatory; anti-diabetic; ophthalmological; anti-rheumatic; anti-arthritic; anti-diabetic; ophthalmological; anti-rheumatic; anti-arthritic;
                   growth or motility of cells expressing a PDGF-C receptor. PDGF-C polypeptides can be used in pharmaceuticals for promoting cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3; Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Murine vascular endothelial growth factor homologue, ZVEGF3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Score 1848; DB 3;
; Pred. No. 3e-181;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY96861 standard; protein; 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
100.0%;
Best Local Similarity 100.0%;
Matches 345; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200034474-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vulnerary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

```
This shows a murine ZVEGF3 a novel vascular endothelial growth factor homologue. Polypeptides comprising an epitope-bearing portion human or murine ZVEGF3 are claimed. The growth factors comprise a growth factor domain and a CUB domain (generic sequence motifs are shown in AAY96859 and AAY96860). The growth factor domain is characterized by an AAY96850 and AAY96860). The growth factor domain is characterized by an AAY96850 cof the "cysteine knot" structure of the platelet-derived growth factor of the "cysteine knot" structure of the platelet-derived growth factor (PDGF) family. The CUB domain shows homology to CUB domains in neuropilins, human bone morphogenetic protein-1, porcine seminal plasma protein, bovine acidic seminal fluid protein and Xenopus laevis tolloid protein. The human zvegf3 gene has been mapped to form multimeric proteins. The human zvegf3 gene has been mapped to form multimeric proteins. The human zvegf3 gene has been mapped to chromosome 40438.3.

CYBGF3 is useful for stimulating the growth of fibroblasts or smooth muscles cells, for activating cell surface PDGF-alpha receptor and for inhibiting PDGF-alpha receptor mediated cellular processes. ZVEGF3 is useful for requlating (post-development) organ growth, regeneration and maintenance, as well as tissue maintenance and repair processes. ZVEGF3 an anagonists are useful for treating cancer, rheumatoid arthritis, antendarial ischemia, vascular intimal hyperplasia, atherosclerosis, wound characterized processes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                        Novel zvegf3 polypeptides and nucleotides encoding them useful for stimulating growth of smooth muscle cells and fibroblasts comprising an epitope bearing portion of a specific amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 1848; DB 3; Length 345; 100.0%; Pred. No. 3e-181; ive 0; Mismatches 0; Indels 0
                                                                                                                                                         Shoemaker KE;
                                                                                                                                                         Sheppard PO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    treating neurodegenerative diseases
                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 169-170; 173pp; English.
                                                                                                                                                       Piddington CS,
                98US-00207120.
99US-0142576P.
99US-0161653P.
                                                                           99US-0165255P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 345; Conservative
                                                                                                                                                   CE, Pic.
                                                                                                                  (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                 WPI; 2000-423420/36.
N-PSDB; AAA51527.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 345 AA;
                                                                                                                                                                        Gilbertson DG,
                    07-DEC-1998;
06-JUL-1999;
                                                                             12-NOV-1999;
                                                         21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and for
                                                                                                                                                         Ŋ
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345

301

ð

99WO-US028968

07-DEC-1999;

```
N-PSDB; AAD04650
                               Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200128586-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gilbertson DG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE00998;
                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE00998
                                                                                                                                                                                ò
                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to the human growth factor homologue zvegf4

(AAB4865), and nucleic acids encoding it (AAC8155). Zvegf4 is a member of the PoGF (platelet-derived growth factor)/MCGF (vascular endothelial growth factor) family. Zvegf4 has a growth factor domain (AAB48654)

C Graracterised by a PDGF cystine knot structure, and a CUB domain (C AAB48655) which has a beta barrel structure, and a CUB domain (C AAB48655) which has a beta barrel structure, and a CUB domain (C C AAB48655) which has a beta barrel structure, and a CUB domain c C C growth. The invention also relates to fusion proteins comprising human c vegf4 or fragments thereof, particularly human zvegf4/human zvegf4 nucleic acids; the recombinant expression of human zvegf4, an antibody which binds to human zvegf4 or a fragment thereof; a method of a cell-surface PDGF receptor using a zvegf4-derived polypeptide; a method of a cell-surface PDGF receptor using a zvegf4-derived polypeptide; and a method of detecting a genetic abnormality in the colloqualing the proliferation, differentiation may an enthod of a patient. Zvegf4 proteins and derived fragments may be comprising exposing bone cells to zvegf4-derived fragments may be consecuted by a patient or repair, or cellular differentiation or proliferation. They are particularly used for the cused to stimulate tissue development or repair, or cellular differentiation or proliferation. They are particularly used to method of soriodontal disease and fractures. They may also be used to ensurite growth (e.g., in the treatment of patient of steadment of cells of an endothelial precursor stem cells, which may be useful in the treatment of endothelial precursor stem cells, which may be useful in the treatment is achieved the anneance of the anneance of the anneance of the anneance of the anneance of the anneance of the anneance of the anneance and the method of the may be useful in the treatment and mobilisation of haematopoietic stem cells immune system.
                                                                                                                                                                                                                                                                                                                    Mouse; zvegf3; zvegf4 fusion; growth factor homologue; VEGF/PDGF family; murine; CUB domain; PDGF-like activity; mitogenic; osteogenic; neovascularisation; tissue repair; proliferation; differentiation; liver damage; neuroregenerative; Alzheimer's disease; multiple sclerosis; periodontal disease; bone fracture; wound healing; vulnerary; ischaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Growth factor homologs and the nucleic acids that encode them, useful e.g. for treating liver damage, ischemia, multiple sclerosis and Alzheimer's disease.
301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gilbertson DG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence represents mouse zvegf3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 130-131; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sheppard PO,
                                                                                                                       AAB48658 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-MAY-1999; 99US-00304216.
10-NOV-1999; 99US-0164463P.
04-FEB-2000; 2000US-0180169P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-MAY-2000; 2000WO-US040047.
                                                                                                                                                                                                                                                                          Mouse zvegf3, SEQ ID NO:35.
                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                             immunomodulation, hepatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gilbert T, Hart CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-687541/67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAC81583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200066736-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus.
                                                                                                                                                                                                                         09-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-NOV-2000.
                                                                                                                                                                        AAB48658;
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse; Zvegf3 antagonist; cell proliferation; stellate cell activation; extracellular matrix production; fibrosis; VSGF-K; PDGF-C; platelet-derived growth factor; PDGF; vascular endothelial growth factor; VEGF; mitogenic effect; therapy, keloid; scleroderma; fibrotic disorder; chronic active hepatitis; fulminant viral hepatitis; amyloidosis; diabetic nephropathy; alpha-1-antitrypsin deficiency; silicosis; asbestosis; renal arteriosclerosis; post necrotic cirrhosis; diabetic glomerulosclerosis; focal glomerulosclerosis; hyperostosis; bulmonary hypertension; idiopathic pulmonary fibrosis; osteoperosis; bronchiolitis obliterans-organising pneumonia; transplant vasculopathy; fibroproliferative disorder.
                                                                                                                                                                                                                                                                              PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LKEEVKLYSCTPRNFSVSIRBELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                          9
                                                                                                                                                                                                          9
                                                                                                                                                                              1 MILIGELILITSALAGQRIGTRAESNISSKIQLSSDKEQNGVQDPRHERVVISGNGSIHS
                                                                                                                                                                                                                                                                                                                     61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GRWCGSGTVPGKQTSKGNHIRIRRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                       1 MLLLGLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                  GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                          Gaps
                                                                   ö
   Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 VTKKYHEVLOLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG
100.0%; Score 1848; DB 3;
100.0%; Pred. No. 3e-181;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE00998 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-OCT-1999; 99US-0161653P.
12-NOV-1999; 99US-0165255P.
01-AUG-2000; 2000US-022223P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-OCT-2000; 2000WO-US029270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                       fatches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse Zvegf3 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-300278/31.
                                       Local Similarity
```

```
require particular matrix production, treating fibrosis and required stellate cell activation in a mammal. The method comprises administering a composition containing a Zvegis antagonist in combination with a delivery vehicle. The Zvegis is a protein that is structurally called to platelet-derived growth factor (PDGF) and the vascular condchisal growth factors (VEGF). The Zvegis protein is also designated as "VEGF-R" and "PDGF-C". The Zvegis antagonist is useful to block the mitogenic effects of zvegis and thereby to inhibit or prevent and treat called social social social social social social active conditions. The zvegis and thereby to inhibit or prevent and treat the partitis, full innant viral hepatitis, post necrotic cirrhosis and alphalantirypsin deficiency, fibrotic disorders of the kidney such as continuous and plantity amyloidosis and renal arteriosclerosis, fibrotic disorders of the lung such as silicosis, asbetcosis, idiopathic pulmonary fibrosis, bronchiolitis obliterans-organising pneumonia and pulmonary fibrosis, calsorders of pancreas, fibroproliferative disorders of the bone such as transplant vasculopathy and fibroproliferative continuous is many of disorders of the bone such as cateopetrosis and hyperostosis. The present
     ğ
     for reducing fibroproliferative disorder
                             kidney, liver and bone, reducing extracellular matrix production, treating fibrosis or reducing stellate cell activation in mammal.
                                                                                                                                                                       patent discloses materials and methods for reducing cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence is mouse Zvegf3 protein
                                                                                                                  2; 70pp; English.
zvegf3 antagonist, liver and bone, r
                                                                                                                  Example 2; Fig
  ğ
```

Sequence 345 AA;

```
ö
                                                                                                                                                                PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                    LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                          PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                             GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                              LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                     LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                              LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                         9
                                                                                                        9
                                                                                                          1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                 GRWCGSGTVPGKQTSKGNHIRIRIFFFFFFFFFFFTHYSIIMPQVTETTSPSVLPPSS
                                                                        1 MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEONGVODPRHERVVTISGNGSIHS
                                         Gaps
                                       ;
       Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                         VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                             VIKKYHEVLQLRPKIGVKGLHKSLIDVALEHHEECDCVCRGNAGG 345
                                     Indels
       4;
                                       ..
   ; Score 1848; DB 4
; Pred. No. 3e-181;
0; Mismatches 0
     100.0%;
100.0%;
Query Match
Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                          61
                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                        ç
                                                                                                        ద
                                                                                                                                         ò
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                              ò
```

```
VEGF; vascular endothelial growth factor; zvegf 3; mouse; chromosome cell proliferation; differentiation; metabolism; migration; revascularisation; solid tumour; diabetic retinopathy; psoriasis; rheumatoid arthritis; cancer; autoimmune disease; inflammation; myocardial ischaemia; scleroderma; fibrosis; glomerulosclerosis;
                                                                                                                                             Mouse VEGF-like protein zvegf 3.
                                   ABG92894 standard; protein; 345
                                                                                                         (first entry)
                                                                                                         19-NOV-2002
                                                                       ABG92894;
RESULT 5
                 ABG92894
                                      &&&&&&&&&&&
```

ö

Gaps

ö

Indels

100.0%; Score 1848; DB 5; 100.0%; Pred. No. 3e-181; iive 0; Mismatches 0;

Matches 345; Conservative

Query Match Best Local Similarity

Sequence 345 AA;

3;

Length 345;

```
The invention relates to an isolated polypeptide, designated zvegf3 (a vascular endothelial growth factor-like protein) of 111-136 amino acid residues in length and comprises the sequence appearing as ABG92889 from amino acid residues 23-35. Also included are an isolated protein comprision a first bolypeptide disulphide bonded to a second polypeptide, where the protein modulates cell proliferation, differentiation, where the protein modulates cell proliferation, differentiation, metabolism or migration, the zvegf 3 encoding polymoleotides and zvegf 3 expression vectors and host cells. Zvegf 3 is useful as additives in tissue adhesives for promoting revascularisation of the healing tissue, for designing molecules that antagonise semaphorin-stimulated activities, including neurite growth, cardiovascular development, cartilage and limb development, and T and B-cell function, and for imaging tumours or other sites of abnormal cell proliferation and in gene therapy applications. The proteins are useful therapentically to stimulate tissue development or repair, or cellular differentiation or proliferation, for stimulating circulatory level of the growth of fibrolast or smooth muscle cells, as molecular weight crossing the ansays for determining circulatory level of the growth of solid tumours, for treating diabetic retinopathy, provided solid tumours, for treating diabetic retinopathy, glomerulosolar therapeution, keloids, liver fibrosis, including scar formation, keloids, liver fibrosis, lung fibrosis, including scar formation, keloids, liver fibrosis, skin wounds, ulcers, burns, skin grafting, and female reproductive tract disorders of therapeutical trephropathy), glomerulosquental ischaemia, scleroders, such and for thrombosis, cardiac sclerosis, neurodegenerating element such and for multiple sclerosis, parkinson's disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, disease, dis
atherosclerosis, skin wound; ulcer; burn; skin grafting;
female reproductive tract disorder; chronic liver disease;
circultatory disorder; heart failure; neurodegenerative disease;
multiple sclerosis; Parkinson's disease; Alzheimer's disease; stroke;
neurite outgrowth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel polypeptide, designated zvegf3 useful for treating skin wounds, ulcers, burns, skin grafting, female reproductive tract disorders, Parkinson's disease, and Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shoemaker KE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sheppard PO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Piddington CS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 4; Fig 2; 68pp; English.
                                                                                                                                                                                                                                                                                                                98US-0111173P.
                                                                                                                                                                                                                                                                                                                                                             99US-0161653P.
                                                                                                                                                                                                                                                                         99US-00457066
                                                                                                                                                                                                                                                                                                                                                                                   99US-0165255P
                                                                                                                                                                                                                                                                                                                                                                                                                          (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gao Z, Hart CE, Piddin
Gilbertson DG, West JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-689759/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; ABS68648
                                                                                                                                           Mus musculus.
                                                                                                                                                                                    US6432673-B1
                                                                                                                                                                                                                                                                         07-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                             21-OCT-1999;
12-NOV-1999;
                                                                                                                                                                                                                                                                                                                  07-DEC-1998;
06-JUL-1999;
                                                                                                                                                                                                                               13-AUG-2002
```

ö

9

300

180

240

180

7

61

61

ઠે 셤 ò 요 요 181

g ò 유 ò g

181

241

301

301

121

121

```
PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                   LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; mouse; zvegf3; zvegf4; platelet derived growth factor; PDGF; homolog; growthi bone; ligament; cartillage; proliferation; osteoblast; chondrocyte; bony defect; fracture; bone graft; implant; periodontal pocket; osteoclast; bone marrow stem cell; osteoporosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Promoting growth of bone, ligament or cartilage in a mammal, involves administering to the mammal a protein which comprises growth factor domain of zvegf3 protein, a homolog of platelet-derived growth factor.
                                                                                           MILIGELELTSALAGQRIGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                         GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGRCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                             GRWCGSGTVPGKQTSKGNHIRIRRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                 LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                               LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK
                                                                     MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVT1SGNGS1HS
                                                                                                                                                                                                                                                                           LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                   ;
 5; Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                   VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
100.0%; Score 1848; DB 5
100.0%; Pred. No. 3e-181;
ive 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 19-20; 31pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB47890 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-DEC-1998; 98US-011173P.
06-JUL-1999; 99US-0142576P.
21-OCT-1999; 99US-0161653P.
12-NOV-1999; 99US-0165255P.
07-DEC-1999; 99US-00457066.
31-MAR-2000; 2000US-0193723P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-MAR-2001; 2001US-00823033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                   Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HART C E.
GILBERTSON D G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gilbertson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-171026/22.
N-PSDB; AAI72444.
                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US2002004225-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouse zvegf3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-JAN-2002
                                                                                                                                       61
                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                       61
                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB47890;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Œ,
     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HART/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GILB/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                     ሯ
                                                                                                                                                                  셤
                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The patent discloses a method for producing a transgenic, non-human animal over-expressing a platelet derived growth factor C (PDGF-C), or its functional fragment or analogue. The method involves introducing a transgenic PDGF-C DNA into a cell of a non-human animal, introducing the cell into a non-human animal and allowing the cell into a non-human animal. The transgenic animal is useful as a model to study disease states characterised by over-expression of PDGF-C and to find therapy for those diseases, particularly hypertrophy and fibrosis in protein from mouse
                                                              GRWCGSGTVPGKQTSKGNHIRIREVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                           LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
 9
                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         over-
                                                                                                                                                     GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSFSVLPPSS
                                                                                                                                                                                                                           1 MLLIGLILITSALAGQRIGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                      LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A transgenic animal over-expressing platelet derived growth factor C useful to study and find therapy for disease associated with PDGF-C o expression, including cardiac hypertrophy and fibrosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ransgenic animal, platelet derived growth factor C, PDGF-C, hypertrophy, fibrosis.
                                                                                                                                                                                                                                                                                                                                                               VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mouse platelet-derived growth factor (PDGF-C) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ľ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 4; Page 42-43; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ponten A, Aase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE13213 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-MAR-2000; 2000US-0192507P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-MAR-2001; 2001WO-US009855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2002-010700/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Li X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200172132-A1.
```

12-FEB-2002

cardiac Mouse;

Mus sp

AAE13213;

AAE13213

04-OCT-2001

Eriksson U,

```
The sequences given in AAB47889-90 represent human and mouse zvegf3, respectively. Zvegf3 is a platelet derived growth factor (PDGF) homolog and it was used in the method of the invention for promoting growth of bone, ligament or cartilage and simulating proliferation of osteoblasts or chondrocytes in a mammal. The proteins used were preferably a dimeric protein of residues 235-345 of human zvegf3 or all of the mouse zvegf3 protein of residues 235-345 of human zvegf3 or all of the mouse zvegf3 protein, with a delivery vehicle. The method of th invention is useful for promoting growth of bone, ligament or cartilage in a mammal, where the composition is administered at a site of a bony defect, preferably a fracture, bone graft site, implant site, or periodontal pocket, and for stimulating proliferation of osteoblasts or chondrocytes in a mammal. It is further useful for promoting proliferation of osteoblasts, where the bone marrow stem cells, where the bone marrow stem cells are harvested from a patient prior to culture. The method is therefore useful for treating osteoporosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LKEBVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PKFPHTYPRINVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth factor homologue; ZVEGF4; proliferation; differentiation; migration; mesenchymal cell; cell surface semaphorin; neuropilin; neurite growth; cardiovascular development; limb development; cardiovascular development; recoll; sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll sevelopment; recoll seve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              autoimmune disease; inflammation; retinopathy; haemangioma; ischaemic event; neuropathy; acute nerve damage; stroke; central nervous system disease; peripheral nervous system disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 1848; DB 5, 100.0%; Pred. No. 3e-181; ive 0; Mismatches 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mouse ZVEGF4-related protein #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABU72435 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-MAY-2000; 2000US-00564595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABU72435;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABU7243
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

```
300
                                                                                                                                                                                                                                                                                                                                                             The invention relates to an isolated protein comprising a first polypeptide disulphide-bonded to a second polypeptide. The first and second polypeptides are from 119-138 amino acid residues and comprises 258-370 amino acid residues of human growth factor homologue ZVEGF4. The protein stimulates proliferation, differentiation, or migration of mesenchymal cells and may modulate activities mediated by cell surface semaphorins. ZVEGF4 may be used to design ant/agonists of neuropilin-semaphorin interactions which may be of use in neurite growth, cardiovascular development, cartilage and limb development, T- and B-cell functions as well as treating theumatoid arthritis, various forms of cancer, autoimmune diseases, inflammation, retinopathies, haemangiomas, ischaemic events, neuropathies, acute nerve damage, central nervous system diseases and peripheral nervous system diseases including stroke.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            homomultimers or heteromultimers that act on tissues to control organ development by modulating cell proliferation, migration, differentiation, or metabolism. The gene for human ZVEGF4 is located on chromosome 11q22.3 -23.1. A transgene construct sa made for producing mice transgenic for human ZVEGF4. The present sequence is a ZVEGF4-related protein sequence. The present sequence is a ZVEGF4-related protein sequence. Note: The present sequence is included in the sequence listing but is not mention elsewhere in the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LKEBVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                           Isolated growth factor analogue ZVEF4 proteins for pharmaceutical composition as, e.g. therapeutic agents, diagnostic agents, and research tools and reagents, includes polypeptides from amino acid residues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The isolated protein is also used for a pharmaceutical composition as therapeutic agents, diagnostic agents, and research tools and reagents. It can be used in the study and regulation of cell and tissue development, as components of cell culture media. The proteins can form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MILIGILILITSALAGQRIGTRAESNISSKLQISSDKEQNGVQDPRHERVVIISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRWCGSGTVPGKOTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LSLDLIANNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MILLGLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VTKKYHEVLOLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 1848; DB 6
100.0%; Pred. No. 3e-181;
cive 0; Mismatches 0
                                                                                                                                         Gilbertson
                                                                                                                                                                                                                                                                                                                             Disclosure; Col 95-98; 67pp; English
                                                                                                                                           Sheppard PO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
                                    10-NOV-1999; 99US-0164463P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 345; Conservative
                                                                                                 (ZYMO ) ZYMOGENETICS
                                                                                                                                         Hart CE,
                                                                                                                                                                                 2003-352153/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                       N-PSDB; ACA64137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seguence 345 AA;
                                                                                                                                           Gilbert T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
Mouse; growth factor homologue; zvegf3; fibroblast; smooth muscle cell;

(W cell-surface platelet-derived growth factor alpha receptor; PDGF;

(W full-thickness skin wound; female reproductive tract; duodenal ulcer;

(W full-thickness skin wound; female reproductive tract; duodenal ulcer;

(W colonged bleeding; periodontal disease; tissue adhesive; liver damage;

(W eronic active hepaticis; hepatic chronic passive congestion; stroke;

(W contral haemorrhagic necrosis; hepatic vein thrombosis; ischaemia;

(W entral haemorrhagic necrosis; hepatic vein thrombosis; ischaemia;

(W ordan transplant; tissue grafting; peripheral neuropathy; spinal cord;

(W spinal injury; neurodegenerative disease; diabetic retinopathy;

(W psoriasis; arthritis; scleroderma; keloid; liver fibrosis; psoriasis;

(W proliferative vascular disorder; ocular neovascularisation;

(M inflammatory disorder; rheumatoid arthritis; vasculogenesis;

(M inflammatory disorder; crerebroprotective; neuroprotective; nootropic;

(M vulnerary; tranquilliser; cerebroprotective; neuroprotective; nootropic;

(M ophthalmological; dermatological; coagulant; cardiant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention relates to the isolation of a growth factor homologue referred to as zvegf3, and the polymucleotide sequence encoding fit. The zvegf3 polypeptide is useful for stimulating the growth of fibroblasts or smooth muscle cells, or for activating a cell-surface platelet-derived growth factor (PDGF) alpha receptor. The zvegf3 polypeptide is useful as a PDGF alpha receptor agonist and thus is useful for treating full-thickness skin wounds, female reproductive tract and prolonged bleeding, periodontal disease, damaged liver tissue, and duodenal ulcers. The polypeptide is also useful as an additive in tissue adhesives for promoting revascularisation of healing tissue. The zvegf3 polypeptide is also useful for treating liver damage including damage due to liver disease, chronic active hepatitis, hepatic chronic passive congestion (CPC), central haemorrhagic necrosis (CHN), hepatic vein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New isolated zvegf3 polypeptide, useful for treating cancer, Alzheimer's disease, Parkinson's disease, chronic active hepatitis, hepatic vein thrombosis, comprises growth factor domain and CUB domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sheppard PO, Shoemaker KE;
                                                                                                                                                                 Mouse growth factor homologue, zvegf3.
                                     ABG76398 standard; protein; 345 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hart CE, Piddington CS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0142576P.
99US-0161653P.
99US-0165255P.
99US-00457066.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Fig 6; 73pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-MAY-2002; 2002US-00139583.
                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gilbertson DG, West JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-328485/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; ABX93182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US2002177193-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-JUL-1999;
21-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-DEC-1999;
                                                                                                                       22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-NOV-1999
                                                                                ABG76398;
RESULT 9
```

```
thrombosis, portal vein thrombosis, cardiac sclerosis, and many types of cirrhosis. The polypeptide is useful for enhancing expansion and mobilisation of endothelial precursor stem cells, creating and scabilising new vessel formation in areas requiring neovascularisation, creating neovascularisation, creating neovascularisation, creating neovascularisation, creating neovascularisation, creating peripheral neuropathies by increasing spinal cord and sensory neurite outgrowth, and as part of therapeutic treatment for the regeneration of neurite outgrowths created by spinal cord and sensory neurite outgrowth, and as part of therapeutic treatment for the regeneration of neurite outgrowths caused by spinal injuries. Application may also be made in treating caused by spinal injuries. Application may also be made in treating caused by spinal injuries. Application may also be made in treating caused by spinal injuries. Application may also be made in treating calerodesma, and reducing fibrosis, thus fibrosis, lung calerodema, and reducing fibrosis, and glomerulosclerosis. An antibody that binds cavegf3 is useful for blocking the mitogenic, chemotactic, or angiogenic ceffects of zvegf3, and for treating proliferative vascular disorders, coular neovascularisation, inflammatory disorders, rheumatoid arthritis, psoriasis, cancer, impaired or excessive vasculogenesis or anglogenesis, and diseases of the nervous system. The present sequence represents mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PKFPHTYPRNMYLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LKEEVKLYSCTPRNFSVSIRBELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKRQNGVQDPRHERVVTISGNGSIHS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vulnerary; dermatological; wound healing; proliferation; zvegf3.; mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GRWCGSGTVVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSLDLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6; Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 1848; DB 6
100.0%; Pred. No. 3e-181;
iive 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADG47752 standard; protein; 345 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-NOV-2000; 2000US-00706968.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0111173P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-MAR-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouse zvegf3 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US6528050-B1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-MAR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADG47752;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                          zvegf3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADG47752

110 ADG4

AC ADG4

XX AC ADG7

XX 11-h

XX XX VIII-h

XX XX VIII

XX XX VIII

XX XX VIII

XX XX PR DG6-1

PR UG6:

XX PR DG7-1

PR DG7-1

PR DG7-1
         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
```

```
GRWCGSGTVPCKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
 Parkinson's disease; cell proliferation; cancer; gene therapy; mouse
                                                                                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 35; 73pp; English.
                                                                                                                                                                                                                                                Sheppard PO,
                                                                                                                       03-MAY-1999; 99US-0132250P.
10-NOV-1999; 99US-0164463P.
04-FEB-2000; 2000US-0180169P.
03-MAY-2000; 2000US-00564595.
                                                                                               06-JUN-2001; 2001US-00876813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 345; Conservative
                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                Gilbert T, Hart CE,
                                                                                                                                                                                               HART C E.
SHEPPARD P O
GILBERTSON D
                                                                                                                                                                                                                                                                        2004-070738/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                     GILBERT T.
                                                                                                                                                                                                                                                                                      N-PSDB; ADJ32787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 345 AA;
                                                 US2004002140-A1
                                                                         01-JAN-2004
                                                                                                                                                                                                                                                                                                                                                    disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                (HART/)
(SHEP/)
                                                                                                                                                                                                                          (GILB/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                     (GILB/)
                         Mus
 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PKFPHTYPRNMVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LKEEVKLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                The present invention relates to a method of promoting wound healing, especially a dermal wound and for promoting proliferation of fibroblasts or smooth muscle cells in a mammal, by administering a polypeptide comprising growth factor domain of human growth factor homologue polypeptide, zvegf3. The present sequence is mouse zvegf3 protein.
                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                            muscle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                  1 MILLIGLILLTSALAGORTGTRAESNLSSKLØLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                          1 MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Growth factor homologue; zvegf4; skin wound; venous stasis; ulcer; fracture repair; skin grafting; neovascularisation; female reproductive tract disorder; bleeding; gastrointestinal tract; liver damage; hepatic chronic passive congestion; CPC; central haemorrhagic necrosis; CHN; neurite growth; neuropathy; neurodegenerative disease; multiple sclerosis; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                      Promoting wound healing or proliferation of fibroblasts or smooth mu cells in a mammal, by administering a polypeptide comprising growth factor domain of human growth factor homolog polypeptide, zvegf3.
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                  Shoemaker KE;
                                                                                                                                                                                                                                                                                                                                                   Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VIKKYHEVLOLRPKIGVKGLHKSLIDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                   DB 7;
                                                                                                                                                                                                                                                                                                                                                / Match 100.0%; Score 1848; DB 7; Local Similarity 100.0%; Pred. No. 3e-181; Nes 345; Conservative 0; Mismatches 0;
                                                                                                  Sheppard PO,
                                                                                                                                                                                                                         Disclosure; SEQ ID NO 43; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADJ32788 standard; protein; 345 AA
                                                                                                 Piddington CS,
99US-0142576P.
99US-0161653P.
99US-0165255P.
99US-00457066.
                                                 31-MAR-2000; 2000US-00541752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                         (ZYMO ) ZYMOGENETICS INC
                                                                                                            West JW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse zvegf3 protein.
                                                                                                                                     WPI; 2003-370630/35.
N-PSDB; ADG47751.
                                                                                              CE,
                                                                                                                                                                                                                                                                                                                           Sequence 345 AA;
                                                                                                            Gilbertson DG,
06-JUL-1999;
21-OCT-1999;
12-NOV-1999;
                                                                                                  Hart
                                      07-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADJ32788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
The invention relates to growth factor homologue zvegf4, its corresponding nucleic acid and methods of using them. The sequences of the invention are used in the study and regulation of cell and tissue development, as components of cell culture media and as diagnostic agents. The zvegf4 polypeptide can be used in treating full-thickness skin wounds, in fracture repair, skin grafting, in constructive healing wounds, in fracture repair, skin grafting, in constructive healing wounds, in fracture repair, skin grafting, in constructive cestabling wounds, in transplanted cells and tissues, or incompanies to promote neovascularisation and increase skin flap survival, to treating female reproductive tract disorders, including acute or chronic placental insufficiency and prolonged bleeding. It can also be used to promote endothelialisation of vascular grafts and stents, in treating acute or chronic lesions of the gastrointestinal tract or treating or repairing liver damage. Zvegf4 can also be used for treating or chronic passive congestion (CPC) and central heamornhagic necrosis (CHN). Crepairing liver damage. Zvegf4 can also be used for treating peripheral neuropathies or modulate neurodegenerative diseases including multiple sclerosis, Alzheimer's disease or Parkinson's disease including multiple sclerosis, Alzheimer's chickesses or Parkinson's disease or the polypeptides, mucleic acids and antipolise and contains and sorders associated with cell loss or abnormal cell proliferation (including cancer). The invention is useful in gene therapy. The present sequence is mouse zvegf3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                        New zvegf4 polypeptides and nucleic acids, useful for diagnosing or treating cell loss or abnormal cell proliferation, e.g. cancer, treating full-thickness skin wounds or treating female reproductive tract
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MILLGLLLLTSALAGORTGTRAESNLSSKLOLSSDKEONGVODPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVT1SGNGS1HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .,
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 1848; DB 8
100.0%; Pred. No. 3e-181;
ive 0; Mismatches 0
Gilbertson
```

ö

σ

```
RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                AAY41766
                                                            g
                                                                                           ઠે
                                                                                                                   g
                                                                                                                                                ઠે
                                                                                                                                                                     g
                                                                                                                                                                                                    ò
                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                      셤
                                          ઠ
                                                                                                                                                                                                                                                        ò
                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to methods for promoting bone, ligament or cartilage growth in a mammal. The methods involve administering to the mammal a composition comprising a dimeric protein of human or mouse zvegf3 sequence and a delivery vehicle. Also disclosed are methods for promoting proliferation or differentiation of osteoblasts, osteoclasts, chondrocytes, or bone marrow stem cells. The delivery vehicle is powdered biodegradable polyester, aqueous polymeric gel or fibrin sealant. The methods of the invention are useful for promoting growth of bone, ligament or cartilage in a mammal. The present sequence represents mouse
                                                                                            241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                              LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Promoting growth of bone, ligament or cartilage in mammal involves administering to mammal composition comprising zvegf3 dimeric protein and
                                        LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                 Bone; ligament; cartilage; growth; mouse; zvegf3; proliferation; differentiation; osteoblast; osteoclast; chondrocyte; bone marrow stem cell.
                                                                                                                                                   VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                 VTKKYHEVLOLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Specifically claimed in Claim 1"
                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; SEQ ID NO 4; 31pp; English
                                                                                                                                                                                                                             ADL18359 standard; protein; 345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-DEC-1999; 99US-00457066.
31-MAR-2000; 2000US-0193723P.
29-MAR-2001; 2001US-00823033.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-SEP-2003; 2003US-00664432
                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                      235. .345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gilbertson DG;
                                                                                                                                                                                                                                                                                                            Mouse zvegf3 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-303322/28.
N-PSDB; ADL18358.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    delivery vehicle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 345 AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2004043031-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             zvegf3 protein.
                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                 20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-MAR-2004.
121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hart CE,
                          181
                                                                             241
                                                                                                                                  301
                                                                                                                                                          301
                                                                                                                                                                                                                                                        ADL18359;
                                                                                                                                                                                                                                                                                                                                                                                                                        Key
Region
                                                                                                                                                                                                                 ADL18359
                         ò
                                               g
                                                                      8
                                                                                                    g
                                                                                                                                 ò
                                                                                                                                                       g
```

DB 8; Length 345;

100.0%; Score 1848;

Query Match

```
ô
                                                                                                                              180
                                                                                                                                                  180
                                                                                    61 PKFPHTYPRNMVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                               PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                       240
                                                                                                                                                                                                                LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                              241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                               9
                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                        Human; PRO; EST; expressed sequence tag; PCR primer; hybridisation; probe; blood coagulation disorder; cancer; cellular adhesion disorder; secreted protein; transmembrane protein.
                                                       MILIGELELTSALAGQRIGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVT1SGNGSIHS
                                                                                                                              GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                           MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVT1SGNGS1HS
                                                                                                                                                                       LSLDLLNNAVTAFSTLBELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                      Gaps
                      ö
                                                                                                                                                                                                                                                                      VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                      Indele
Pred. No. 3e-181;
 100.08; F1
                                                                                                                                                                                                                                                                                                                                     AAY41766 standard; protein; 345
                                                                                                                                                                                                                                                                                                                                                                                                      Human PRO200 protein sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0077450P.
98US-0077611P.
98US-0077611P.
98US-007701P.
98US-0078086P.
98US-00780810P.
98US-0078936P.
98US-0078936P.
98US-0078936P.
98US-0078936P.
98US-0078936P.
98US-0078936P.
98US-007963P.
98US-007963P.
98US-007963P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-US005028
                                                                                                                                                                                                                                                                                                                                                                               07-DEC-1999 (first entry)
           Best Local Similarity 100. Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9946281-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-MAR-1998;
12-MAR-1998;
13-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-1998;
26-MAR-1998;
27-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-1998;
31-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-MAR-1998;
20-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-MAR-1998;
31-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-MAR-1998
                                                                                                                                                                                                                                                                                                                                                          AAY41766;
                                                                                                       61
                                                                                                                                                                                            181
                                                                                                                              121
                                                                                                                                                                       181
                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                301
```

```
<u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Baker
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yuan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney A,
98US-0080134P
98US-0080337P
98US-00803334P
98US-00803334P
98US-0081034P
98US-0081034P
98US-0081202P
98US-0081202P
98US-0081203P
98US-008134P
98US-008134P
98US-008134P
98US-008134P
98US-008134P
98US-008134P
98US-008344P
98US-008344P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-008348P
98US-0084414P
98US-008448P
98US-0084414P
98US-0084414P
98US-00844414P
98US-0084414P
98US-00844414P
98US-00844414P
98US-00844414P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
98US-008549P
                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard A,
                                                                                                                                                                                                                                                                                                                                                                                                                                11-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wood WI,
```

WPI; 1999-551358/46. N-PSDB; AAZ34296.

```
The present invention describes secreted and transmembrane polypeptides and their polymucleotides. The nucleotide sequences are useful as sources of probes, primers, for chromosome mapping, and for generation of antisense sequences. They can also be used to create transgenic animals. The proteins can be used to treat a variety of diseases and disorders, depending on their function. Diseases that may be treated include blood coagulation disorders, cancers and cellular adhesion disorders. They may also be used to raise antibodies. AA233891 to AA234338, and AAY41685 to AAX41774 represent polynucleotide and polypeptide sequence given in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGCACCCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PKFPHTYPRNMYLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
New secreted and transmembrane polypeptides and their polynucleotides, useful for treating blood coagulation disorders, cancers and cellular adhesion disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MSLFGLLLITSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vascular endothelial growth factor related protein; VBGF-R protein; tissue growth inhibition; tumour growth; cancer; tissue growth; angiogenesis; coronary artery blockage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 90.2%; Score 1667; DB 2; Length 345; Best Local Similarity 87.0%; Pred. No. 1.4e-162; Matches 300; Conservative 27; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VTKKYHEVLOLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human vascular endothelial growth factor related protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY30023 standard; protein; 345 AA
                                                                                                                                             Claim 12; Fig 207; 530pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0072635P.
98US-0088089P.
98US-0090544P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US001574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-JAN-1998;
05-JUN-1998;
24-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W09937671-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY30023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY30023
                      임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SECTION OF THE SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ਨੇ
```

99WO-US005190 98US-00040220.

Kuo

```
New growth factor polypeptide useful for treating cardiovascular or endothelial disorders, e.g. cardiac hypertrophy.
                                                                                                                                                                                                        Claim 1; Fig 2; 122pp; English.
                                                                                          (GETH ) GENENTECH INC
                                                                                                                                      WPI; 1999-580306/49.
                                                                                                                                                   N-PSDB; AAZ23691
                                   10-MAR-1999;
                                                        17-MAR-1998;
02-NOV-1998;
              23-SEP-1999
                                                                                                                Ferrara N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 장, 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            જ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                       The present sequence represents a vascular endothelial growth factor related (VEGF-R) protein. VEGF-R can be used in assays to identify compounds that bind to it or that antagonize its activity. VEGF-R antagonists (e.g. anti-VEGF-R antibodies) are useful for inhibiting tissue growth. This is useful for inhibiting tumour growth and for treating cancer. VEGF-R itself can be used to stimulate tissue growth, angiogenesis and to treat coronary artery blockage. The VEGF-R coding sequence can be used for the recombinant production of the VEGF-R protein
                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                compounds.
                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VEGF-E; human; vascular endothelial cell growth factor; wound repair; treatment; cardiovascular disorder; endothelial disorder; therapy; tissue generation; regeneration; cardiac hypertrophy; cancer; detection; angiogenic disorder; age-related macular degeneration; vascular disease;
                                                                                                                                                                                                                                                                                                                                                                                          1 MILLIGILLITSALAGQRIGTRAESNISSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                       1 MSLFGLLLITSALAGÓRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                             PKPPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEBPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                   A vascular endothelial growth factor related protein and related polynucleotide, useful for identifying antagonists and binding lpha
                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                     Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VTKKYHEVLQLRPKTGVRGLHKSLTDVALLEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                    90.2%; Score 1667; DB 2; 187.0%; Pred. No. 1.4e-162; ive 27; Mismatches 18;
                                                                                                                                                                                                                                                                                  Query Match 90.2%; Score 1667; UD Best Local Similarity 87.0%; Pred. No. 1.46-1 Matches 300; Conservative 27; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neovascularization; tumor; gene mapping
                                                                                                                                    Claim 1; Page 56-58; 62pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY33679 standard; protein; 345
 98US-0098548P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                             Song HY;
                      (ELIL ) LILLY & CO ELI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human VEGF-E protein.
                                                                  WPI; 1999-458680/38.
                                                                             N-PSDB; AAX86352
                                                                                                                                                                                                                                                              Sequence 345 AA;
                                             ŝ
31-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JAN-2000
                                             Ŋ
                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                             Dou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
This invention describes the isolation of a novel human vascular candothelial cell growth factor-E (VEGF-E) polypeptide which has cardothelial cell growth factor-E (VEGF-E) polypeptide which has tranquillizer, vulnery and cardiant activity. VEGF-E can be administered to treat cardiovascular or endothelial disorders in mammals, especially be useful in wound repair and tissue generation and may especially be used to treat cardiac hypertrophy It can be combined with a carrier in pharmaceutical compositions, which can be administered to treat disorders as above. VEGF-E can be used to screen for antagonists and agonists, and the antagonists administered to treat cardiovacular degeneration. It can be used to generate antibodies, candiovascular degeneration. It can be used to generate antibodies, useful therapeutically as antagonists, as above. The antibodies are also useful the detect VEGF-E polypeptide, especially to diagnose are also cardiovascular, endothelial or angiogenic disorders in mammals (e.g. vascular disease, or neovascularization associated with tumor formation, by contacting the antibody with a tissue sample and detecting formation of a mantibody-VEGF-E polypeptide complex. Polynucleotides encoding VEGF-E can be used to diagnose cardiovascular and endothelial disorders in the vegetuence is a susceptibility to a disease related to a mutated form of VEGF-E (e.g. cardiovascular, endothelial or angiogenic disorder such as a tumor), by detecting a mutation in the VEGF-E endoding sequence is a disease related or a mutated form of vEGF-E (e.g. cardiovascular, endothelial or angiogenic disorder such as a tumor), by detecting a mutation in the VEGF-Energence and endothelial and endothelial and endothelial complex related from a send to disease related to a mutated form of vEGF-E (e.g. cardiovascular, endothelial or angiogenic disorder such as a tumor), by cardiovascular endothelial complex produce argine explaced from a send to disease related to resease related to a mutated form of detect related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sample. They may also be used to produce probes useful to detect related sequences or for gene mapping. This sequence represents the human VEGF-E protein described in the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MSLFGLLLLTSALAGGRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LKEEVKLYSCTPRNFSVSIREELKRTDT1FWPGCLLVKRCGGNCACCLHNCNECQCVPRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MLLLGLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSLDLLMNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90.2%; Score 1667; DB 2; Length 345; 87.0%; Pred. No. 1.4e-162; cive 27; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 300; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 345 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

WO9947677-A2

\$ a

Search completed: September 3, 2005, 19:25:51 Job time : 122.5 secs

*

```
GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd.
```

OM protein - protein search, using sw model

September 3, 2005, 19:17:40 ; Search time 25.5 Seconds (without alignments) 1301.756 Million cell updates/sec Run on:

US-09-818-943-2 1848 1 MLLIGLLLITSALAGQRTGT......DVALEHHEECDCVCRGNAGG 345 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

283416 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	spinal cord-derive	spinal cord-derive	platelet-derived g	℧	procollagen C-endo	procollagen C-endo	A5 antigen precurs	procollagen C-endo	procollagen C-endo	intrinsic factor-B	ac	procollagen I C-pr	ц	polyprotein - Afri	Ra-reactive factor	Ra-reactive factor	metalloproteinase	tolloid-BMP-1 like	hypothetical prote	hensin - rabbit	complement subcomp	development protei	procollagen I C-pr	hyaluronate-bindin	vascular endotheli	membrane-type friz	platelet-derived g	hypothetical prote	brain-specific CUB
SUMMARIES	αı	JC7592	JC7591	JC7998	JC2218	A58788	BMHU1	JQ0948	B58788	I49540	T09456	T08618	A55362	A39288	T30337	A59271	154763	871352	T31069	T22812	T30549	CIHURB	S58984	JH0403	A41735	S69207	JC7629	TVCTSS	T30018	JC7985
	DB	2	~	7	N	Н	Н	Н	н	7	~	7	~	-	~	-	Н	~	~	~	~	Н	N	~	~	7	~	Н	~	7
	Length	370	370	370	707	823	730	927	986	991	3623	3623	449	1057	1524	989	669	597	1070	3871	1594	705	1464	402	277	419	579	245	767	533
de	Query	40.8	40.7	40.4	10.3	10.3	9.9	9. 9.	•	9.8	9.4	•	8.5	8.3	8.0	7.9	7.8	7.8	7.7	7.6	7.5	7.4	7.3	7.2	6.9	6.9	•	6.8		6.8
	Score	754	753	746.5	191	190	183.5	183.5	181	181	174.5	160	158	153	147.5	145.5	144	143.5	141.5	140.5	139	137.5	135.5	133.5	128	127	126.5	125.5	125.5	125
	Result No.	п	7	m	4	S	9	7	æ	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29

tumor necrosis fac	sanko - human	CRP-ductin-alpha p	TSG-6 homolog PS4	ebnerin precursor	platelet-derived g	platelet-derived g	platelet-derived g	complement subcomp	platelet-derived g	PDGF-related trans	complement subcomp	16K vascular endot	hypothetical prote	UVS.2 protein - Af	platelet-derived g
JC6506	A59386	T42721	A47290	A57190	151551	808220	151550	805008	PFHUG2	TVMVSS	JC6554	D49530	T33161	151569	825097
~	N	0	~	~	~	~	N	٦	٦	٦	~	~	~	~	7
275	2403	2083	276	1290	200	215	226	695	241	226	694	148	321	319	225
6.7	9.9	6.5	6.4	6.4	6.2	6.2	6.2	6.1	6.1	9.0	5.9	5.9	5.8	2.6	5.6
123	122.5	119.5	117.5	117.5	114.5	114.5	114.5	113	112.5	111.5	109	108.5	107	104	103.5
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

	RESULT 1 JOTS92 Spinal cord-derived growth factor-B precursor - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 09-Jul-2004 C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 09-Jul-2004 C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 09-Jul-2004 C;Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 09-Jul-2004 R;Hamada, T.; Ui-ri, K.; Imaki, J.; Miyata, Y. Biochem. Biophys. Res. Commun. 280, 733-737, 2001 A;Hamada, T.; Ui-ri, K.; Imaki, J.; Miyata, Y. Biochem. Biophys. Res. Commun. 280, 733-737, 2001 A;Hamada, T.; Ui-ri, K.; Imaki, J.; Miyata, Y. Biochem. Biophys. Res. Commun. 280, 733-73, 2001 A;Contents: Fetal brain A;Cross-references: UNIPROT: Q9EQT1; DDBJ:AB052170 C;Genetics: A;Cross-references: UNIPROT: Q9EQT1; DDBJ:AB052170 C;Genet
·	Query Match Best Local Similarity 46.2%; Pred. No. 8.2e-55; Matches 151; Conservative 62; Mismatches 86; Indels 28; Gaps 10;
	QY 37 EQNGVQD-PRHERVVILSGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLFFDERFG 95
	QY 96 LEDPEDDICKYDFVEVERPSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSE 153
	Qy 154 PGFCIHYSIIMPQVTETTSPSVLPPSSLSLDLLMNAVTAFST 195
	QY 196 LEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNLLKEBVKLYSCTPRNF 255
15 - 112 - 112	QY 256 SVGIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRKVTKKYHEVLQLRP 313
	Qy 314 -KTGVKGLHKSLTDVALEHHEECDCVC 339

```
Best Local Similarity
Matches 47; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318
                                                                                          9/
                                                                                                                                                                                                                                                                                                                                                                           236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      296
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                    g
                                                                                                                                    a
                                                                                                                                                                                                                             П
                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                        ò
                                                                                                                                                                                   ò
ò
                                                                                                                                                                                                                                                                                                                       ;Gene: scdgf-B
;1-17/Domain: secretory signal sequence #status predicted <SIG>
;18-370/Product: spinal cord-derived growth factor-B #status predicted <MAT>
;23-170/Region: CUB domain #status predicted
;272-370/Region: homologous to platelet-derived growth factor/vascular endothelial grow;294-308/Region: conserved motif #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 placeder. derived growth factor-D - mouse C; Species: Mus musculus (house mouse) C; Species: Mus musculus (house mouse) C; Species: Mus musculus (house mouse) C; Date: 10-Nov-2003 #sequence_revision 10-Nov-2003 #text_change 24-Nov-2003 C; Date: 10-Nov-2003 #sequence_revision 10-Nov-2003 #school 10-Nov-2003 R; Zhuo, Y.; Hoyle, G.W.; Zhang, J.; Morris, G.; Lasky, J.A. Biochem. Biophys. Res. Commun. 308, 126-132, 2003 A; Title: A novel murine PDGF-D splicing variant results in significant differences in pe A; Reference number: JC7998; PMID:12890490 A; Reference number: JC7998; PMID:12890490 A; Residues: 1-370 <ZHU> C; Comment: This protein is a potent mesenchymal cell mitogen and chemoattractant involve C; Genetics: Pdgf-D A; Introns: 42/2; 110/1; 170/2; 191/2; 258/2; 330/1; 334/2 C; Keywords: fibrosis; PDGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   쩐
                                                                                                                                                               SCDGF/PDGF-C/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and chemoattractant involve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42 ESNHLIDLYRRDETIQVKGNGYVQSPRFPNSYPRNLLLTWRLHS-QENTRIQLVPDNQFG 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEDPEDDICKYDFVEVEEPSDGSVL--GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSE 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  154 PGFCIHYSII---MPQVTETT-----SPSVLPPSSLSLDLLNNAVTAFST 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPRKVTKKYHEVLQLRP-- 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  278 SVNIREELKLANVVPFPRCLLVQRCGGNCGCGTVNWRSCTCNSGKTVKKYHEVLQFEPGH 337
                 inal cord-derived growth factor-B precursor - human
Species: Homo sapiens (man)
Date: 30-Jun-2001 #sequence_revision 30-Jun-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNLLKEEVKLYSCTPRNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        homologous to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37 EQNGVQD-PRHERVVTISGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 370;
                                                                                                                                                                                                                                                                                Cross-references: UNIPROT: Q9BWV5; UNIPROT: Q9GZP0; DDBJ: AB033832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92; Indels
                                                                                                                                                          factor
                                                                                   C; Accession: JC7591
R; Hamada, T.; Ui-Tei, K.; Imaki, J.; Miyata, Y.
R; Hamada, T.; Ui-Tei, K.; Imaki, J.; Miyata, Y.
B; Hamada, T.; Ui-Tei, K.; Imaki, J.; Miyata, Y.
B; Biochem. Biophys. Res. Commun. 280, 733-737, 2001
A; Reference number: JC7591; MUID:21092670; PMID:11162582
A; Recession: JC7591
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-370 < HAM>
A; Ross references: UNIPROT:Q9BWV5; UNIPROT:Q9GZP0; DDBJ:AB0
C; Genetics: scdgf-B
A; Gene: scdgf-B
F;1-17/Domain: secretory signal sequence #status predicted <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40.4%; Score 746.5; DB 2;
43.5%; Pred. No. 3.4e-54;
tive 63; Mismatches 102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 40.7%; Score 753; DB 2; Best Local Similarity 45.3%; Pred. No. 9.9e-55; Matches 148; Conservative 59; Mismatches 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  314 - KTGVKGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             338 IKRRGRAKTMALVDIQLDHHERCDCIC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 43.55
Matches 151; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

6

Gaps

31,

Indels

```
procollagen C-endopeptidase (EC 3.4.24.19) - African clawed frog (clone 22AN)
N.Alternate names: bone morphogenic protein 1
C,Species: Xenopus laevis (African clawed frog)
C,Date: 3.0-Sep-1933 #sequence_revision 20-Aug-1994 #text_change 09-Jul-2004
C,Accession: JC2218
R,Maeno, M.; Xue, Y.; Wood, T.I.; Ong, R.C.; Kung, H.
Gene 114, 257-261, 1993
A,Title: Cloning and expression of cDNA encoding Xenopus laevis bone morphogenetic prote A,Reference number: JC2218; MUID:94085787; PMID:8262384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A, Molecule type: mRNA
A, Residues: 1-707 < MAB.
A, Residues: 1-707 < MAB.
A, Residues: 1-707 < MAB.
A, Residues: 1-707 < MAB.
A, Residues: 1-707 < MAB.
A, Residues: 1-707 < MAB.
A, Residues: 1-707 < MAB.
A, Cross-references: UNIPROT: P98070; GB: L12249; NID: 9406540; PIDN: AAA16313.1; PID: 9406541
C, Comment: This protein induces ectopic cartilage formation in vivo.
C, Superfamily: procollagen C-endopeptidase; astacin homology; CIr/CIs repeat
F, 285-394 Domain: astacin homology < A37-
F, 285-394 Domain: CIr/CIs repeat homology < CIRI>
F, 389-507 (Domain: CIr/CIs repeat homology < CIRI>
F, 389-507 (Domain: EGF homology < CIR2>
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-like repeat
F, 554-666 (Region: complement Ir/1s-li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                              134 TSKGNHIRIRRVSDEYFPSEPGFCIHYSII---MPQVTETT-----SPSV 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            176 LPPSSLSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKV 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        201 TDP-TLTADALDKTVAEFDTVEDLIKHFNPVSWQDDLENLYLDTPHYRGRSY-HDRKSK- 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VNINILKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQ 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617
                                                                                                                                                                                            RLVAVDENVRIOLTFDERFGLEDPEDDICKYDFVEVEEPSDGS--VLGRWCGSGTVPGKQ 133
                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    procollagen C-endopeptidase (EC 3.4.24.19) precursor, splice form HIS - human
    75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   predicted
                                                           NGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEE-
QRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHSPKFPHTYPRNMVLVW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;528/Modified site: erythro-beta-hydroxyasparagine (Asn) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CVPRKVTKKYHEVLQLRP---KTGVKGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 114 -PSDGSVLGRWCGSGTVPGKOTSKGNHIRIRFVSDEYFPSEPGF 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LTSDSKLHGKFCGS-ELPAVITSQYNNMRIEFKSDNTV-SKKGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10.3%; Score 191; DB 2; 45.2%; Pred. No. 9.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47; Conservative
```

```
A'pescription: catalyzes hydrolysis of the carboxyl-terminal propeptide of collagen type because in termative splicing, because attacin homology; Clr/Cls repeat homology; Els. Superfamily: procollagen C-endopeptidase; attacin homology; Clr/Cls repeat homology; Els. Staylomain: signal sequence #status predicted <SIG.
F;13-731/Domain: signal sequence #status predicted <SIG.
F;13-731/Domain: astacin homology <CIRI>
F;13-731/Domain: astacin homology <CIRI>
F;13-731/Domain: astacin homology <CIRI>
F;13-544/Domain: Clr/Cls repeat homology <CIRI>
F;551-547/Domain: Clr/Cls repeat homology <CIRI>
F;551-547/Domain: EGF homology <ERR>
F;591-700/Domain: Clr/Cls repeat homology <CIRI>
F;91,142,332,363,599/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;163-319,185-205,322-348,375-397,435-461,488-510,551-563,559-572,574-587,591-617,644-66
F;131,217,223,272/Binding site: zinc (His, His, His, Tyr) #status predicted
F;214/Active site: Glu #status predicted
F;555/Modified site: erythro-beta-hydroxyasparagine (Asn) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 As antigen precursor - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 16-Jun-2000
C;Accession: JH0466; JQ0948
R;Takagi, S.; Hirata, T.; Agata, K.; Mochii, M.; Eguchi, G.; Fujisawa, H.
Reuron 7, 295-307, 1991
A;Title: The A5 antigen, a candidate for the neuronal recognition molecule, has homologial A;Reference number: JH0466; MUID:91137458; PMID:1908252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Experimental source: tadpole, brain
A; Note: this protein has motife homologous to complement components CIr and CIs and to c.
C; Comment: This protein is a neuronal cell surface molecule involved in the neuronal rec
C; Comment: This protein is a neuronal cell surface molecule involved in the neuronal rec
C; Superfamily: Kanopus A5 antigen; CIr(Cis repeat homology; discoidin I amino-terminal h
F; 1-21/Domain: signal sequence #status predicted <SIG>
F; 22-927/Produce: A5 antigen #status predicted <A5A>
F; 27-138/Domain: CIr(Cis repeat homology <CIRI>
F; 274-424/Domain: CIr(Cis repeat homology <CIRI>
F; 274-424/Domain: discoidin I amino-terminal homology <NNI>
F; 210-584/Domain: discoidin I amino-terminal homology <NNI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-927 <TAK>
A;Cross-references: GB:D10467; GB:D01077; NID:g222962; PIDN:BAA01260.1; PID:g222963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55 NGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEE 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            599 NGSITSPGWPKEYPPNKNCIWQLVAPIQ-YRISLOFD---PFETEGNDVCKYDFVEVRSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          114 -PSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;646-812/Domain: MAM homology <MAM>
F;861-883/Domain: transmembrane #status predicted <TMM>
F;150,261,300,523,844/Binding site: carbohydrate (Asn) (covalent) #status
                         A;Cross-references: GB:M22488; NID:g179499; PIDN:AAA51833.1; PID:g179500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
9.9%; Score 183.5; DB 1; Length 730;
Best Local Similarity 38.9%; Pred. No. 4.2e-07;
Matches 49; Conservative 18; Mismatches 44; Indels 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          th 9.9%; Score 183.5; DB 1; Similarity 30.7%; Pred. No. 5.7e-07; 55; Conservative 34; Mismatches 65;
                                                                                                                                                                      A; Cross-references: GDB:125203; OMIM:112264
                                                                                                                                                                                                                        A; Map position: 8p21-8p21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         173 PSVLPP 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               706 PALQPP 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: JH0466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Residues: 703-823 < TAK.
A; Residues: 703-823 < TAK.
A; Residues: 703-823 < TAK.
A; Residues: 703-823 < TAK.
A; Concerver (1992)
C; Genetics: 108:125203; OMIM:112264
A; Genes references: GDB:125203; OMIM:112264
A; Concerver (1992)
C; Function: 8p21-8p21
C; Function: 8p21-8p21
C; Function: acatalyzes hydrolysis of the carboxyl-terminal propeptide of collagen type C; Function: acatalyzes hydrolysis of the carboxyl-terminal propeptide of collagen type C; Superfamily: procollagen C-endopeptidase; astacin homology; Clr/Cls repeat homology; Clr/Cls repeat homology; Clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repeat homology clr/Cls repea
N;Alternate names: bone morphogenic protein splice form BMP-1/His
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 28 Mar-1998 Hsequence_revision 09-Apr-1998 #text_change 18-Jun-1999
C;Accession: A37278; A58788
R;Wozney, J.M.; Rosen, V.; Celeste, A.J.; Mitsock, L.M.; Whitters, M.J.; Kriz, R.W.; Hew Science 242, 1528-1534, 1988
A;Title: Novel regulators of bone formation: molecular clones and activities.
A;Reference number: A37278; MUID:89072730; PMID:3201241
A;Accession: A37278
A;Molecule type: mRNA
A;Residues: 1-702, ERRPALOPPRGRPHOLKFRVOKRNRTPQ' <WOZ>A;Cross-references: GB:M22488; NID:g179499; PIDN:AAA51833.1; PID:g179500
R;Takahara, K.; Lyons, G.E.; Greenspan, D.S.
J; Biol. Chem. 269, 32572-32578; 1994
A;Title: Bone morphogenetic protein-1 and a mammalian tolloid homologue (WTld) are encoch A;Reference number: A58788; MUID:95096114; PMID:7798260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R.W.; Hew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         procollagen C-endopeptidase (EC 3.4.24.19) precursor, splice form BMP1 - human N,Alternate names: bone morphogenic protein 1 (BMP1)
C;Specias: Homo sapiens (man)
C;Specias: Homo sapiens (man)
C;Accession: A37278; ES8788
C;Accession: A37278; ES8788
A;Wozney, J.M.; Rosen, V.; Celeste, A.J.; Mitsock, L.M.; Whitters, M.J.; Kriz, Science 242, 1528-1534, 1988
A;Title: Novel regulators of bone formation: molecular clones and activities. A;Reference number: A37278; MUID:89072730; PMID:3201241
A;Accession: A37278
A;Molecule type: mRNA
A;Residues: 1-730 <WOZ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55 NGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEF 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       114 -PSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHY----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10.3%; Score 190; DB 1; Length 823; 36.0%; Pred. No. 1.4e-07; ive 20; Mismatches 48; Indels ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161 -----SIIMPQVTETTSPSVLPPSSLSLD 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            713 HLSGLELLCPHALVDTVPA--PPSALHGD 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             54; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
```

Best Loca Matches

8 셤 ઠે g

ઠે g

9

Gaps

654

predicted

ę,

50 VIISGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFV 109

ò

rel

18

mouse

```
C;Species: Homo sapiens (man)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 09-Jul-2004
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 09-Jul-2004
C;Accession: T09456
R;Kozyraki, R.; Kristiansen, M.; Silahtaroglu, A.; Hansen, C.; Jacobsen, C.; Tommerup, N
R;Kozyraki, R.; Kristiansen, M.; Silahtaroglu, A.; Hansen, C.; Jacobsen, C.; Tommerup, N
Blood 91, 3593-3600, 1998
A;Title: The human intrinsic factor-vitamin B12 receptor, cubilin: Molecular characteriz.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Residues: 1-3623 <KOZ>
A;Cross-references: UNIPROT:060494; EMBL:AF034611; NID:g3929528; PIDN:AAC82612.1; PID:g3
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT:P98063; GB:L24755; NID:g439606; PIDN:AAA37306.1; PID:g439607
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A Gene: Bmp-1
C; Superfamily: procollagen C-endopeptidase; astacin homology; Clr/Cls repeat homology; C; Superfamily: procollagen C-endopeptidase; zinc
C; Keywords: hydrolase; metalloproteinase; zinc
C; Keywords: hydrolase; metalloproteinase; zinc
F; 135-326/Domain: astacin homology «AST»
F; 556-592/Domain: EGF homology «EG1»
F; 556-705/Domain: EGF homology «EG2»
F; 712-747/Domain: EGF homology «EG2»
F; 712-747/Domain: EGF homology «EG2»
F; 218, 222, 228, 277/Binding site: zinc (His, His, His, Tyr) #status predicted
F; 218, 222, 228, 277/Binding site: zinc (His, His, His, Tyr)
                                                                                                                    C;Accession: 149540

R;Fukagawa, M.; Noboru, S.; Hogan, B.L.M.; Jones, C.M.

Dev. Biol. 163, 175-183, 1994

A;Title: Embryonic expression of mouse bone morphogenetic protein-1 (BMP-1) which
A;Reference number: 149540; MUID:94229342; PMID:8174772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2173 GHFCGSHASSTLFTSDNOMFVQFISDHSNEGQGFKIKYEAKSLACGGNVYIHDADSAGYV 2232
                            C-endopeptidase (EC 3.4.24.19) precursor, tolloid-like splice form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55 NGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60 -SPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEE--PSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A,Map position: 10p12
C;Superfamily: intrinsic factor-B12 receptor cubilin; EGF homology
C;Kaywords: receptor; vitamin B12 uptake
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-3623/Product: intrinsic factor-B12 receptor #status predicted
F;436-467/Domain: EGF homology <EGF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 3623;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 GORTGTRAESNLSSK----LQLSSD--KEQNGVQDPRHERVVTISGNGSIH-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             114 -PSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHY 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               intrinsic factor-B12 receptor Cubilin precursor - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number: Z16677; MUID: 98241400; PMID: 9572993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 9.4%; Score 174.5; DB 2; Best Local Similarity 31.9%; Pred. No. 1.8e-05; Matches 53; Conservative 26; Mismatches 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Accession: T09456
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mENA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.8%; Score 181; DB 2. llarity 42.6%; Pred. No. 1e-06; Conservative 16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                       A;Residues: 1-991 <RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Simi
Matches 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                     BBS788

BS788

B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                         EVIDGDNANGQLLGKYCGK-IAPSPLVSTGPSIFIRPVSDYETPG-AGFSIRYEVFKTGP 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEE- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EV--EEPSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIM--P 165
                               87
                                                                                                                                                                                                                                            214
                                                                                                                                                                                                                                                                               :: |:| |: |:: |:: |:: || ECSRNFTSSNGVIKSPKYPEKYPNALECTYIIFA---PKMQEIV--LEFESFELEADS 198
166 QVTE--TTSPSVLP----PSSLSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               114 -PSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHY 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9.8%; Score 181; DB 1;
42.6%; Pred. No. 9.9e-07;
tive 16; Mismatches 38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 42.69
Matches 46; Conservative
                                                                                                                                                                     88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55
                                                                                                  ò
                                                                                                                                                              셤
                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
```

ŝ

Gaps

113

8

Gaps

<MAT>

116

a

RESULT

S

ઠે g

```
#status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dorsal ventral patterning protein tolloid (EC 3.4.24.-) - fruit fly (Drosophila melanoga C; Species: Drosophila melanogaster C; Species: Drosophila melanogaster C; Species: Drosophila melanogaster C; Species: Drosophila melanogaster C; Species: Drosophila melanogaster C; Stocession: A39288 Rs; Shimell, M.J.; Ferguson, E.L.; Childs, S.R.; O'Connor, M.B. Cell 67, 469-481, 1991 A; Title: The Drosophila dorsal-ventral patterning gene tolloid is related to human bone A; Reference number: A39288; MUID:92034970; PMID:1840509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-1057 <SHI>
A;Cross-references: UNIPROT:P25723; GB:M76976; NID:g157305; PIDN:AAA28491.1; PID:g157306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: FlyBase:FBgn0003719
C;Superfamily: dorsal-ventral patterning protein tolloid; astacin homology; Clr/Cls repe
C;Keywords: duplication; hydrolase; metalloproteinase; zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      112 EEPSDGSVLGRWCGSGTVPGKQTSKGNHIRIRPVSDEYFPSEPGFCIHYSIIM----- 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         224 AVSDDSRRLGKFCGD-AVPGSISSEGNELLYQFVSDLSVTAD-GFSASYKTLPRGTAKEG 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 391 PDKECVWRITAPD-NHQVALKF-QSFELE--KHDGCAYDFVEIRDGNHSDSRLIGRFCGD 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;900-1013/Domain: CIr/Cls repeat homology <CIR5>
F;221,225,231,280/Binding site: zinc (His, His, His, Tyr) #status predicted
F;222/Active site: Glu #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69 RNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEE--PSDGSVLGRWCGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56 GSIHSPKFPHT-YPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13 LAGORIGIRAESNISSKIQLSSDKEQNGVQDPRHERV----VTISGNGSIHSPKFPHTYP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
A;Cross-references: GB:L33799; NID:g642907; PIDN:AAA61949.1; PID:g642908 C;Genetics:
A;Gene: GB:PCOLCE
A;Gene: GB:PCOLCE
A;Cross-references: GDB:305468; OMIM:600270
A;Map position: 7421.3-7422
C;Keywords: extracellular protein; glycoprotein; pyroglutamic acid
F;1-25/Domain: signal sequence #status predicted <SIG>F;26-49/Product: #status predicted <NAT>
F;37-146/Domain: CIr/Cls repeat homology <CIRI>F;59-70/Domain: CIr/Cls repeat homology <CIRI>F;26/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #sF;26/Modified site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 1057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8.5%; Score 158; DB 2; Length 449; 34.5%; Pred. No. 3e-05; ative 21; Mismatches 50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 8.3%; Score 153; DB 1;
Best Local Similarity 33.3%; Pred. No. 0.00023;
Matches 47; Conservative 28; Mismatches 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F:624-740/Domain: Cir/Cis repat homology <CIR3>
F:747-782/Domain: EGF homology <EG2>
F:787-896/Domain: Cir/Cis repeat homology <CIR4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;136-329/Domain: astacin homology <AST>
F;352-464/Domain: Clr/Cls repeat homology
F;468-578/Domain: Clr/Cls repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -- PQVTETTSPSV-LPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OGPGPKRGTEPKVKLPPKS 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;585-620/Domain: EGF homology <EG1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 34.5*
Matches 48; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: FlyBase:tld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                      intrinsic factor-B12 receptor CUBILIN precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Daccession: Totalia
C;Species: Rattus norvegicus (Norway rat)
C;Daccession: T08618
R;Mosetrup, S.K.; Kozyraki, R.; Kristiansen, M.; Kaysen, J.H.; Rasmussen, H.H.; Brault,
J. Biol. Chem. 273, 5255-524, 1998
A;Tile: The intrinsic factor-vitamin B1 receptor and target of teratogenic antibodies
A;Reference number: Z16459; MUID: 98148073; PMID: 9478979
A;Reference number: Z16459; MUID: 98148073; PMID: 9478979
A;Recession: T08618
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Reledues: L3623 *MOE>
A;Cross-references: UNIPROT: O70244; EMBL: AF022247; NID: 93834379; PIDN: AAC71661.1; PID: 93
C;Genetics: CUBILIN
C;Superfamily: intrinsic factor-B12 receptor cubilin; EGF homology
C;Keywords: egg yolk; endocytosis; glycoprotein; intestine; kidney; peripheral membrane
F;1-20/Domain: signal sequence #status predicted <SIG>
F;1-13623/Peroduct: intrinsic factor-B12 receptor CUBILIN #status predicted <MAT>
F;436-467/Domain: EGF homology <EGF>
F;436-467/Domain: EGF homology <EGF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M.; Eddy, R.L.; Jani-Sait, S.; Show
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A55362
procollagen I C-proteinase enhancer protein precursor - human
procollagen I C-proteinase enhancer protein precursor - human
C; Species Homo Sapiens (man)
C; Date: 06-Peb-1995 #sequence_revision 06-Peb-1995 #text_change 15-Mar-2004
C; Accession: A55362
R; Takahara, K.; Kessler, E.; Biniaminov, L.; Brusel, M.; Eddy, R.L.; Jani-Sait, S.; Sho
J; Biol. Chem. 269, 26280-26285, 1994
A; Title: Type I procollagen COOH-terminal proteinase enhancer protein: identification,
A; Reference number: A55362; MUID:95014462; PMID:7523404
A; Accession: A55362
A; Status: not compared with conceptual translation
A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | | | : | |:|| |::|| | |:|| | SS-FYLEFHYN--CTNDYLEIYDTAAQTFLGRYCGK-SIPPSLISNSNSIKLIFVSDSAL 1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----YWDGS--STGCGGN----LTTPTGVLTSPNYPM 1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           151 PSEPGFCIHY-----SIIMPQVTET----TSPSVLP---PSS-----LSLDLLNNAVT 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----SCTPRNFSVSIREBLKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRKVT 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31 QLSSDKEQNGVQDPRHERVVTISGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           924 KFSSDKLECG-----EVLTAS-TGIIESPGHPNVYPRGVNCTWHVV-VQRGQLIRLEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DERFGLEDPEDDICKYDFVEVEPSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  192 AFS--TLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNLLKEEVKLY-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            72;
                                                                            2290 APILSKFCGT-SLPSSQWSSGEVMYLRFRSDN-SPTHVGFKAKYSI 2333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 3623;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44; Mismatches 130; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1184 PYYHSSECYWRLEASHG-SPPELEFODFHLEHHPSC 1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KKYHE---VLQLRPKTGVKGLHKSLTDVALEHHEEC 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match

8.7%; Score 160; DB 2;
Best Local Similarity 26.8%; Pred. No. 0.00028;
Matches 90; Conservative 44; Mismatches 130,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1142 KFKSDAALTAKGFSA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Residues: 1-449 <TAK>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   303
```

셤 ઠે 셤 셤

ઠે

g ò 셤

ઠે

g

à

```
completed: September 3, 2005, 19:30:38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Job time : 26.5 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rareactive factor (EC 3.4.21.-) 2 precursor - human
N.Alternate names: mannose binding protein-associated serine proteinase 2 (MASP-2)
C.Speciae: Homo sapiens (man)
C.Space: Hay-2000 aspeins (man)
C.Space: Hay-2000 aspeins (man)
C.Space: J9-May-2000 aspeins (man)
C.Space: J9-May-2000 aspeins (man)
C.Space: J9-May-2000 aspeins (man)
C.Space: J9-May-2000 aspeins (man)
R.Thiel. S.; Vorup-Jensen, T.; Stover, C.M.; Schwaeble, W.J.; Laursen, S.B.; Poulsen, K.
Nature 386, 506-510, 1997
A.Title: A second serine protease associated with mannan-binding lectin that activates characes number: A5271; MUD: 972412; PMID: 9087411
A;Reference number: A59271; MUD: 97242412; PMID: 9087411
A;Reference number: A59271; MUD: 97242412; PMID: 9087411
A;Reference number: A59271; MUD: 97242412; PMID: 9087411
A;Reference number: A59271; MUD: 972412; PMID: 9087411
A;Residues: 1-686 *CUEN>
A;Residues: 1-686 *CUEN>
A;Residues: 1-686 *CUEN>
A;Residues: 1-686 *CUEN>
A;Residues: 1-686 *CUEN>
A;Residues: 1-686 *CUEN>
A;Reperimental source: tissue liver
A;Note: submitted to GenBank, December 1996
A;Reperimental source: tissue liver
A;Note: submitted to GenBank, December 1996
A;Reperimental source: tissue liver
A;Note: submitted to GenBank, December 1996
A;Reperimental source: tissue liver
A;Note: submitted to GenBank, December 1996
A;Rep position: lp36.2-lp36.3
C;Genetics:
A;Gene: GDB: MASP2
A;Genetics:
C;Genetics:
C;Genet
                                                                                                                                                                                                                                                                      polyprotein - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Species: Xenopus laevis (African clawed frog)
C;Species: Z2-Oct-1999 #sequence_revision 22-Oct-1999 #text_change 09-Jul-2004
C;Accession: T30337
R;Yang, J.C.; Lindsay, L.L.; Hedrick, J.L.
R;Yang, J.C.; Lindsay, L.L.; Hedrick, J.L.
R;Yang, J.C.; Lindsay, L.L.; Hedrick, J.L.
R;Yang, J.C.; Lindsay, L.L.; Hedrick, J.L.
R;Yang, J.C.; Lindsay, L.L.; Hedrick, J.L.
R;Yang, J.C.; Lindsay, L.L.; Hedrick, J.L.
R;Yaccession: T30337
A;Accession: T30337
A;Accession: T30337
A;Accession: T30337
A;Accession: T30337
A;Accession: List A;AN
A;Accession: List A;AN
A;Cross-references: UNIPROT:Q91674; EMBL:U81290; NID:g2981640; PID:g2981641; PIDN:AAC247
C;Superfamily: tryosin related polyprotein; trypsin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    495 EEKQLIARLCGY-TLPLPISSPENTMLIRFKTD-MENSYPGFKVKFSFVPKEKQFSLPVD 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQ-----VT 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ETTSPSVLPPSSLSLDLLNNA-VTAFSTLEELIRYLEPD----RWQVDL------DS 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEV-EEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2; Length 1524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 8.0%; Score 147.5; DB 2; Best Local Similarity 28.7%; Pred. No. 0.001; Matches 54; Conservative 34; Mismatches 73;
                                             547 KLPPNIKT-RSNQMYIRFVSD 566
127 GTVPGKQTSKGNHIRIRFVSD 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : | | |
613 IISPQWIL 620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       215 LYKPTWOL 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169
                                                                                                                                                                                                        14
        ઠે
                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

```
F;300-361/Domain: complement factor H repeat homology <FH1>
F;366-430/Domain: complement factor H repeat homology <FH2>
F;456-679/Domain: trypsin homology <TRY-
F;72-90,142-156,152-165,167-180,184-211,241-259,300-348,328-361,366-412,396-430,434-552,
F;158/Modified site: erythro-beta-hydroxyasparagine (Asn) #status predicted
F;444-445/Cleavage site: Arg-1le (autolytic) #status predicted
F;484,532,633/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                         55 NGSIHSPKFPHTYPRNWIVWRLVANDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEP 114
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                      Length 686;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115 SDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYS 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  250 TDREEHGPFCGK-TLPHRIETKSNTVTITFVTDE-SGDHTGWKIHYT 294
                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                   ; Score 145.5; DB 1;
; Pred. No. 0.00055;
27; Mismatches 42;
                                                                                                                                                                                                                                         7.9%;
                                                                                                                                                                                                                            Ouery Match
Best Local Similarity 30.8*
Matches 33; Conservative
```

```
September 3, 2005, 19:09:34; Search time 114.5 Seconds (without alignments) 1542.946 Million cell updates/sec
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                   OM protein - protein search, using sw model
                                                                                                                                                           Run on:
```

US-09-818-943-2 1848 1 MLLIGLILLTSALAGQRTGT......DVALEHHEECDCVCRGNAGG 345 1612378 Total number of hits satisfying chosen parameters: 1612378 segs, 512079187 residues BLOSUM62 Gapop 10.0 , Gapext 0.5 Title: Perfect score: Sequence: Scoring table: Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	09qy71 m fallotein	Q8ci19 mus musculu	_	Q9eqx6 rattus norv	Q9ul22 homo sapien			Q8k429 rattus norv	Q9eqt1 rattus norv	O9gzp0 homo sapien		Q925i7 mus musculu	Q6v9h4 oryctolagus		Q8qfx6 brachydanio		O57658 gallus gall		P98070 xenopus lae	Q91925 xenopus lae	_	Q69db7 brachydanio	Q6rt22 brachydanio	Q6t870 brachydanio	057381 xenopus lae	Q66ki3 xenopus lae	Q9y617 homo sapien		P28824 xenopus lae	Q9wvm6 mus musculu	Q6nue0 xenopus lae
Olimanico	Q9QY71	Q8C119	Ф9лни8	O9EQX6	Q9UL22	Q9NRA1	091946	Q8K429	Q9EQT1	O9GZPO	Q9BWV5	Q925I7	Q6V9H4	Q8K2L3	NRP1_BRARE	Q69D <u>B</u> 8	057658	Q99JM4	BMP1_XENLA	091925	Q6T869	Q69DB7	Q6RT22	Q6T870	057381	Q66KI3	Q9Y6L7	000060	NRP1_XENLA	Q9WVM6	Q6NUE0
DB	5	~	7	7	0	~	~	~	N	N	0	~	ď	~	-	N	N	N	-	0	N	ď	7	~	~	0	~	~	ч	~	7
* Query Match Length DB	345	345	345	345	345	345	345	258	370	370	364	370	300	261	923	923	691	34	707	977	871	959	959	959	735	735	1015	1078	928	1012	913
* Query Match	100.0	6.66	98.4	97.5	90.5	90.0	84.0	74.4	40.8	40.7	40.6	40.4	36.8	23.8	10.9	10.9	10.4	10.4	10.3	10.3	10.1	10.1	10.1	10.1	10.1	10.1	10.0	10.0	6.0	9.9	9. 8.
Score	1848	1846	1819	1801	1667	1664	1552	1375	754	752	750.5	746.5	679.5	440.5	201	201	192.5	192	191	191	186.5	186.5	186.5	186.5	186	186	185	185	183.5	183	181.5
Result No.	-	6	m	4	Ŋ	v	7	80	0	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	52	56	27	28	29	30	31

Q92135 rattus norv Q6p550 mus musculu	P13497 homo sapien P98063 mus musculu Q6nzm2 mus musculu	Q6awa9 homo sapien Q96i90 homo sapien Q71sw6 homo sapien	Q96ih5 homo sapien Q9h2e1 homo sapien Q6x907 homo sapien	O14786 homo sapien Q86t59 homo sapien Q68dn3 homo sapien
Q9Z135 Q6P550	BMP1_HUMAN BMP1_MOUSE Q6NZM2	Q6AWA9 Q96190 Q71SW6	Q961H5 Q9H2E1 Q6X907	NRPI HUMAN QBGT59 QGBDN3
0.0	·	0 0 0	000	H 70 70
241 775	986 991	538 609 641	644 704 906	923 923 923
e.e.	0 0 0 0 6 6 6 6	ພູບູ ທີ່ ທີ່ ຄໍ	ດ ດ ດ ຕໍ່ຕໍ່ຕໍ່	ດ ດ ດີດີ
181	181 181	176 176 176	176 176 176	176 176 175
3.8	9 8 8 9 8 4 8 8 9 8 9 9 9 9 9 9 9 9 9 9	3 8 8 7 3 9 8 9	444 012	4 4 4 ይ 4 ጊ

ALIGNMENTS

```
STRAIN=CZECH II.TISSUE=Mammary tumor;

MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MALSTAIN=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MALSTAIN=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MALSTAIN=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MALSTAIN=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

MALSTAIN=CRANTER TO SCHARE TO, MARS S.I., Mand J., Haish R.K., And L., Marsham R.M., Paramecon R.D., Mander C., Mandel L., Scheetz T.E., Brands S.S., Loquellano M.A., Peters G.J., Abramson R.D., Mullahy S.J., Mars S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Milalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Milalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Mitching M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                    241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MGD; MGJCSG, 11989631; Pdgfc.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0005161; P:platelet-derived growth factor receptor bin. . .; IDA.
GO; GO:0008284; P:positive regulation of cell proliferation; IDA.
GO; GO:0007171; P:requiation of peptidyl-tyrosine phosphoryla. .; IDA.
GO; GO:0007171; P:transmembrane receptor protein tyrosine kin. .; IDA.
InterPro; IPRO00052; PD_growth_factor.
Pfam; PPO041; CUB; 1.
                                                            121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
1021_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN-CZECH II; TISSUE-Mammary tumor;
Strausberg R.;
Submitted (SEP-2002) to the EMBL/GenBank/DDBJ databases.
Submitted (SEP-2002) to the PDGF/VEGF growth factor family.
EMBL; BC037696; AAH37696.1; -. PDGF/VEGF growth factor family.
HSSP; Q9JJS8; INTO.
                                                                                                                                                                                                                                                                                                                                                                                            VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                            301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR.2003 (TrEMBLrel. 23, Created)
01-MAR.2003 (TrEMBLrel. 23, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Platelet-derived growth factor, C polypeptide.
Name=Pdgfc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and mouse cDNA sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8C119
                                                                     셤
                                                                                                                                              ò
                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HIDDAY SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE
                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

Adachi J., Aizawa K., Akimura T., Arakawa T., Brond H., Carninci P.,
Adachi J., Aizawa K., Akimura T., Arakawa T., Brond H.,
Carninci P.,
Bukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
Adrif J., Inotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M.,
Katoh H., Kawai J., Kojima Y., Murata M., Nakamura M.,
Nishi K., Nomura K., Numazaki R., Ohno M., Ohsaton N., Okazaki Y.,
Sato R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagawa A., Takahashi F., Takaku-Akahira S., Takada Y., Tanaka T.,
Tagawa A., Takahashi F., Takaku-Akahira S., Takada Y., Tanaka T.,
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
- I- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
EMBL, AK032947, BAC2316.1; -.
BENBL, AK022947, BAC3158.1; -.
BENBL, AK022947, BAC3158.1; -.
BENBL, AK021767; BAC3158.1; -.
BENBL, AK031389 180.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PKFPHTYPRNMVLVMRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AK052947; BA35216.1; ...
EMBL; AK052947; BA35216.1; ...
MGD; MGI:1859631; Pdgfc.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0005161; P:platelet-derived growth factor receptor bin. ..; IDA.
GO; GO:0005039; P:positive regulation of cell proliferation; IDA.
GO; GO:0007171; P:transmembrane receptor protein tyrosine kin. ..; IDA.
InterPro; IPR0000055; CUB.
InterPro; IRR0000025; PD_growth_factor.
Pfam; PF00431; CUB; 1.
SMART; SM00442; CUB; 1.
SWART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                   SEQUENCE FROM N.A.
STRANN=C57BL/6J; TISSUE=Cecum, Cerebellum, and Head;
STRANN=C57BL/6J; TISSUE=Cecum, Cerebellum, and Head;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Normalization and subbraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                          STRAIN=C57BL/6J; TISSUE-Cecum, Cerebellum, and Head;
STRAIN=C57BL/6J; TISSUE-Cecum, Cerebellum, and Head;
MEDLINE=20530913; PubMed=11076661; DOI=10.101/gr.152600;
A Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Kiteunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., A. Pujiwake S., Inoue K., Tosawa M., Ohara E., Matshiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., A. Okazaki Y., Muramatau M., Inoue Y., Kira A., Hayashizaki Y., "RIKBN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MILLGLILLTSALAGQRIGTRAESNISSKLQLSSDKEQNGVQDPRHERVVIJSGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 1848; DB 2; Length 345; Best Local Similarity 100.0%; Pred. No. 2.1e-141; Matches 345; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38741 MW; 3A58A1F701B84EA2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE, PS01180; CUB; 1.
PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Growth factor; Mitogen
SEQUENCE 345 AA; 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

us-09-818-943-2.rup

```
241
                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                        121
                               Query Match
Best Local $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             쉽
                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                       ò
                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDLCKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LSLDLLMNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LKEEVKLYSCTPRNFSVSIRELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mech. Dev. 96:209-213(2000).

Mech. Dev. 96:209-213(2000).

BNBL; AF286725; AAF91483.1; -.

HSSP; Q9JUS8; 1NTO.

MGD; MGI:1859631; Pdgfc.

GO; GO:0005615; C:extracellular space; TAS.

GO; GO:0005161; F:platelet-derived growth factor receptor bin. .; IDA.

GO; GO:0008284; F:positive regulation of cell proliferation; IDA.

GO; GO:0005731; P:trangmembrane receptor protein tyrosine kin. .; IDA.
                                                                                                                                                                                                                                                                                   61 PKFPHTYPRNMVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                        1 MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEONGVODPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-Swiss-Webster/NIH;
MEDLINE-20471814; PubMed-10960785; DOI-10.1016/S0925-4773(00)00425-1;
MEDLINE-20471814; PubMed-10960785; DOI-10.1016/S0925-4773(00)00425-1;
MIM X., Kim I., Tam P.P.L., Koh G.Y., Nagy A.;
"The mouse Pdgfc gene: dynamic expression in embryonic tissues during
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus' (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                ;
                                                                                                                                                             Score 1846; DB 2; Length 345;
Pred. No. 3e-141;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000859; CUB.
InterPro; IPR000072; PD_growth_factor.
InterPro; IPR000072; PD_growth_factor.
Pfam; PP00411; CUB; 1.
SWART; SW00141; PDGF; 1.
SWART; SR00141; PDGF; 1.
SROSITE; PS01180; CUB; 1.
SROSITE; PS02788; PDGF 2; 1.
SEQUENCE 345 AA; 38886 MW; FA1486BED6D362F8 CRC64;
SMART; SM00042; CUB; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS01180; CUB; 1.
GROSITE; PS0128; PDGF_2; 1.
Growth factor; Mitogen.
SEQUENCE 345 AA; 38741 MW; 9A58A05CGC0E9614 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-0CT-2000 (TrEMBLrel. 15, Created)
01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-0CT-2003 (TrEMBLrel. 25, Last annotation update)
Platelet-derived growth factor C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345 AA
                                                                                                                                                                                                             1; Mismatches
                                                                                                                                                                99.9%;
                                                                                                                                                                Query Match
Best Local Similarity 99.7
Matches 344; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organogenesis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09JHV8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
Q9JHV8
    8 2 2 2 2 2
                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DO BRANT BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRANK BRA
```

```
ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                       PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSEDGSVL 120
                                                                                                                                                                                                                                                       PKFPHTYPRNMVLVMRLVAVDENVRTQLTFDERFGLEDPEDDICKYDFVEVEEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LKEBUKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 LKEEVKLYSCTPRNFSVSIREELKRTDTRFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                              9
                                                                                                                                                                 9
                                                                                                                                                1 MLLIGLILLTSALAGQRIGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVIISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                   121 GRWCGSETVPGKQTSKGNHIRIRFVSDEYFPSEPGFCHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                             LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 LSLDLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYVKKSKVVNLNL
                                                                                                           1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                           Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-Wister, N.-..

STRAIN-Wister, TISSUB-Kidney;

X MEDLINE-21092670; PubMed=11162582; DOI=10.1006/bbrc.2000.4187;

A Hamada T., Ui-Tei K., Imaki J., Miyata Y.;

Hamada T., Ui-Tei K., Imaki J., Miyata Y.;

T "Molecular cloning of SCOGF-B, a novel growth factor homologous to SCOGF/PDGF-C/fallotein.";

Biochem. Biophys. Res. Commun. 280:733-737(2001).

I SIMILARITY: Belongs to the PDGF/VEGF growth factor family.

REMBI, AB033830; BAB19969:1; -.

REMBI, AB033830; BAB19969:1; -.

RO; GO:0016020; C:membrane; IEA.

GO; GO:0000838; P:cell proliferation; IEA.

GO; GO:0000074; P:regulation of cell cycle; IEA.

RITEPPO; IPR000072; PD_growth_factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97.5%; Score 1801; DB 2; Length 345; 96.8%; Pred. No. 1.3e-137; Live 5; Mismatches 6; Indels
     Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                        4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38734 MW; F296DA6E9B765D10 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR-2001 (TrEMBLrel. 16, Created)
1-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Spinal cord-derived growth factor.
Score 1819; DB 2;
Pred. No. 4.6e-139;
0; Mismatches 4;
     98.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; PDGF 2; 1.
Growth factor; Mitogen.
SEQUENCE 345 AA; 38734 MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 96.8
Matches 334; Conservative
                                                        Matches 341; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00431; CUB; 1.
Pfam; PF00341; PDGF; 1.
SMART; SM00042; CUB; 1.
SMART; SMO0141; PDGF; 1
                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [1] __
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=rScdgf;
```

```
Jest Local Similarity 87.07
Matches 300; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9NRA1
RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA RAARA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                     241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                             241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Brain;
MEDLINE=20317014; PubMed=10858496; DOI=10.1016/S0014-5793(00)01640-9;
Hamada T., Ui-Tei K., Miyata Y.;
Hamada T., Ui-Tei K., Miyata Y.;
Hamada Ediride from developing spinal cords, SCDGF, is a unique member of the PDGF/VEGF family.";
FEBS Lett. 475:97-102(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDLINE=21347863; PubMed=11297552; DOI=10.1074/jbc.MI01056200;
MEDLINE=21347863; PubMed=11297552; DOI=10.1074/jbc.MI01056200;
Gilbertson D.G., Ddf. M.E., West J.W., Kelly J.D., Sheppard P.O.,
Hofstrand P.D., Gao Z., Shoemaker K., Bukowski T.R., Moore M.,
Feldhaus A.L., Humes J.M., Palmer T.E., Hart C.E.;
"Platelet-derived growth factor C (PDGF-C), a novel growth factor that binds to PDGF alpha and beta receptor.";
J. Biol. Chem. 276:27406-27414(2001).
                                                                                                                        61 PKFPHTYPRNTVLVWRLVAVDENVRIQLTFDERFGLEDPEDDLCKYDFVEVEFEPSDGSVL
                                                                                                                                                                                                  GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                        LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                  181 LSLDLINNAVTAFSTVEELIRFLEPDRWQIDLDSLYKPTWPLLGKAFLYGKKSKAVNLNL
MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVT1SGNGSIHS
                                             1 MILLGLLLTSALAGORTGTRAESNLSSKLOLSSDKEQNGVODPRHERVVTISGNGSIHS
                                                                                                PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Uterus;
MEDLINE-20461776; PubMed=11004490; DOI=10.1016/S0167-4781(00)00066-X;
Trai Y.J., Lee R.K., Lin S.P., Chen Y.H.;
"Identification of a novel platelet-derived growth factor-like gene, fallotein, in the human reproductive tract.";
Biochim. Biophys. Acta 1492:196-202(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Secretory growth factor-like protein fallotein (Spinal cord-derived
growth factor) (Platelet-derived growth factor C) (VEGF-E).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [4]

SEQUENCE FROM N.A.

MEDLINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003;

Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D., Brush J.,

Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd leaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S.,

Huang A., Xim H.S., Klimowski L., Jin Y., Johnson S., Lee J.,

Lewis L., Liao D., Mark M., Robbie E., Sanchez C., Schoenfeld J.,

Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name-hSCDGF; Synonyms-PDGFC; ORFNames-UNQ174;
Homo sapiens (Human)
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                19
                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9UL22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
Q9UL22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                             ò
                                                                                                                                        g
                                                                                                                                                                                                ò
                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PRFPHTYPRNTYLVWRLVAVBENVWIQLTFDERFGLEDPEDDICKYDFVEVEBEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LKBEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                              Cadcowskir F.;

"The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment.";

"The sasessment.";

Genome Res. 13:2265-2270(2003).

"BMBL; AR031831; BAB032861.; -.

"BMBL; AR031831; BAB032861.; -.

"BMBL; AR260738; AAK51637.1; -.

"BMBL; AY35843; AAK51637.1; -.

"BMBL; AY35843; AAK51637.1; -.

"BMBL; AY35843; AAK51637.1; -.

"BMBL; AY35843; AAK51637.1; -.

"BMBL; AY35843; Council and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Platelet-derived growth factor C.
Homo saplens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
07BL_TaxID=9606;
Vandlen R., Watanabe C., Wieand D., Woods K., Xie M.H., Yansura D.
Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I.,
Godowski P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-Lung;
MEDLINE=2026801; PubMed=10806482; DOI=10.1038/35010579;
Li X., Ponten A., Aase K., Karlsson L., Abramsson A., Untela M.,
Backstrom G., Hellstrom M., Bostrom H., Li H., Soriano P.,
Betsholtz C., Heldin C.-H., Alitalo K., Ostman A., Eriksson U.;
"PDGP-C is a new protease-activated ligand for the PDGF alpha-receptor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90.2%; Score 1667; DB 2; Length 345; 87.0%; Pred. No. 9.6e-127; ive 27; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301 VIKKYHEVLOLRPKTGVRGIHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   345 AA
```

```
301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q8K429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8K429;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8K429
ID QE
      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEVEBSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=white legiorn; TISSUE=Spinal cord;
MEDLINE=20317014; PubMed=10858496; DOI=10.1016/S0014-5793(00)01640-9;
Hamada T., Ui-Tei K., Miyata Y.;
"A novel gene derived from developing spinal cords, SCDGF, is a unique member of the PDGF/VEGF family.";
FRBS Lett. 475.97-102(2000).
-!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
EMBL; AB033829; BAB03265.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSLFGLLLVTSALAGQRRGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
Nat. Cell Biol. 2:302-309(2000).
-!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
EMBL; AF244813; AAF80597.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                             Growth factor, Mitogen.
SEQUENCE 345 AA; 39043 MW; 590889CEA55CC5EA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                    Genew, HGNC:8801; PDGFC.
GO; GO:0016020; C:membrane; IEA.
GO; GO:000803; F:growth factor activity; IEA.
GO; GO:000803; F:growth factor activity; IEA.
GO; GO:0000074; P:cell proliferation; IEA.
GO; GO:000074; P:regulation of cell cycle; IEA.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF00411; CUB; 1.
Pfam; PF00411; PDGF; 1.
SWART; SW00041; PDGF; 1.
PROSITE; PS0180; CUB; 1.
PROSITE; PS0180; CUB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                             90.0%; Score 1664; DB 2;
86.7%; Pred. No. 1.7e-126;
iive 28; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  091946 PRELIMINARY, PRT; 091946, 001-007-2000 (TEWBLrel. 15, Created) 01-007-2000 (TEWBLrel. 15, Last seq 01-007-2003 (TEWBLrel. 25, Last ann Spinal cord-derived growth factor. Name=SCDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 86.78 Matches 299; Conservative
                                                                        HSSP; Q9JJS8; 1NTO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gallus
      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DR RRYC BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RRY BR RY BR RRY R RRY R RRY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŝ
```

```
180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 LKEEVRLYSCTPRNFSVSLREELKRTDT1FWPLCLLVKRCGGNCACCHQNCNCGCDFTK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MILLGLLLLTSALAGORTGTRAESNLSSKLOLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match 84.0%; Score 1552; DB 2; Length 345; Best Local Similarity 80.3%; Pred. No. 2e-117; Matches 277; Conservative 37; Mismatches 31; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAINS-Sprague-Dawley; TISSUE-Skin;
Brown S.A., Coberly D.M., Rohrich R.R., Chao J.J.;
Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AF50348; AMM47265.1; -.
HSSP; Q9JJS8; INTO.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0016030; C:membrane; IEA.
GO; GO:0008151; P:cell growth and/or maintenance; IEA.
InterPro; IPR000072; PD_growth_factor.
InterPro; IPR00072; PD_growth_factor.
SPEM; PF00431; CUB.
SWART; SM00431; CUB.
PROSITE; PS01180; CUB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38940 MW; 97ACEA992BF5128C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
platelet-derived growth factor C (Fragment).
GO; GO:0016020; C:membrane; IEA.
GO; GO:000803; F:growth factor activity; IEA.
GO; GO:000803; F:growth factor activity; IEA.
GO; GO:000074; P:regulation of cell cycle; IEA.
InterPro; IPR000055; CUB.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF00431; CUB; 1.
Pfam; PD0041; PGF; 1.
ProDom; PD001629; PD_growth_factor; 1.
SMART; SM00042; CUB; 1.
                                                                                                                                                                                                                                                                                               PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; PDGF 2; 1.
Growth factor; Mitogen.
SEQUENCE 345 AA; 38940 MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                             SMART; SM00042; CUB;
SMART; SM00141; PDGF;
```

ဖ

```
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Iria;
                                                                                                                                                                                                                                                                                                                                                                                                338
                                             101
                                                                                                                                   161
                                                                                                                                                                                                                                                                                                          278
                                                                                        154
                                                                                                                                                                              196
                                                                                                                                                                                                                                                                  256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
Q9GZP0
                                    셤
                                                                                   ò
                                                                                                                            g
                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
                                                                                                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                  42 QDPRHERVVTISGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPED 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 LLGKAPLYGKKSKAVNLNLLKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCG 240
                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

MEDLINE=21092670; Pubmed=11162582; DOI=10.1006/bbrc.2000.4187;

MEDLINE=21092670; Pubmed=11162582; DOI=10.1006/bbrc.2000.4187;

Hamada T., U1-Tei K., Imaki J., Miyata Y.;

Hamada T., U1-Tei K., Imaki J., Miyata Y.;

Hamada T., U1-Tei K., Imaki J., Miyata Y.;

Endecular cloning of SCOGF-B, a novel growth factor homologous to SCOGF/PDGF-C/fallotein.";

Endecular Biophys. Res. Commun. 280:733-737(2001).

RESP., G7592; J77592.

RESP., G7592; J77592.

RESP., G7592; J77592.

RESP., G900493; F:growth factor activity; IEA.

G0; G0:000803; F:growth factor activity; IEA.

RO; G0:000803; F:growth factor.

RICEPPC; IPR000072; PD_growth_factor.

RICEPPC; IPR000072; PD_growth_factor.

RESP., G0042; CUB.

RESP., G00441; PPGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                   121 IIMPQVTETTSPSVLPPSALSLDLINNAVTAFSTVEELIRFLEPDRWQIDLDSLYKPTWP
                                                                                                                                                                                                                                                                                      102 DICKYDFVEVEEPSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYS
                                                                                                                                                                                                                                                                                                                 61 DLCKYDFVEVEEEPSDGSVLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYS
                                                                                                                                                                                                                                                                                                                                                                            IIMPQVTETTSPSVLPPSSLSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLGKAFLYGKKSKVVNLNLLKEEVKLYSCTPRNFSVSIREELKRTDTIEWFGCLLVYRCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 QDPRHERVVTISGNGSIHSPKFPHTYPRNTVLVWRLVAVDENVRIQLIFDERFGLEDPED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37 EQNGVQD-PRHERVVTISGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFG
                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                         ö
                                                                                                              Length 258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40.8%; Score 754; DB 2; Length 370; 46.2%; Pred. No. 1.1e-52; ive 62; Mismatches 86; Indels
                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; PDGF 2; 1.
SEOUENCE 370 AA; 42809 MW; 7BE8A251F679BF73 CRC64;
                                                                   88625B989FCC3F8B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                            Score 1375; DB 2;
Pred. No. 3.1e-103;
                                                                                                                                                       5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Spinal-cord derived growth factor-B. Name=rSCDGF-B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GNCACCLHNCNECOCVPR 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GNCACCLHNCNECQCVPR 299
                                                                 29255 MW;
                                                                                                          74.4%;
PS50278; PDGF_2; 1.
                                                                                                                                                       Matches 250; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           151; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                 258 AA;
                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                          162
  PROSITE:
                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09EQT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
  STTS
                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SO REAL PROPERTY OF SOCIOUS SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE SOCIAL SERVICE 
                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
```

```
277
                                            SVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPRKVTKKYHEVLQLRP-- 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SVNLREBELKLTNAVFFPRCLLVQRCGGNCGCGTLNWKSCTCSSGKTVKKYHEVLKFFPGH 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAR-2001 (TYEMBLrel. 16, Created)
01-MAR-2001 (TYEMBLrel. 16, Last sequence update)
01-MAR-2004 (TYEMBLrel. 27, Last annotation update)
05-JUL-2004 (TYEMBLrel. 27, Last annotation update)
Spinal cord-derived growth factor-B (MSTP036) (Platelet-derived growth factor D) (Iris-expressed growth factor long form).
Name=hSCDGR-B; Synonyms=IEGF, PDGFD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDINE=22103462; PubMed=12107412;
Wistow G., Berstein S.L., Ray S., Wyatt M.K., Behal A., Touchman J.W.,
Bouffard G., Smith D., Peterson K.;
                                                                                                                                                                                     Qiang B.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ີ່
LEDPEDDICKYDFVEVEEPSDGS--VLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSE
                                                                                                                                                PGFCIHYSII---MPQ-----VTET----TSPSVLPPSSLSLDLLNNAVTAFST
                                                                                                                                                                                                                                                                                            LEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNLLKEEVKLYSCTPRNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu S.,
Y.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-21231380; PubMed-11331882; DOI=10.1038/35074593; Lakochelle W.J., Offfers M., McDonald W.F., Chillakuru K.A., Giese N.A., Lokker N.A., Sullivan C., Boldog F.L., Yang M., Vernet Burgess C.E., Fernandez E., Deegler L.L., Rittman B., Shimket S. Shimket S. R.A., Rothberg J.M., Lichenstein H.S.; Protherg D. A. Novel Protease-Activated Growth Factor."; Nat. Cell Biol. 3:517-521(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    beta-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
PubMed=11331881; DOT=10.1038/35074588;
Bergsten E. Uutela M., Li X., Pietras K., Ostman A., Heldin C.H., Alitalo K., Eriksson U.;
"PDGF-D is a specific, protease-activated ligand for the PDGF beta-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=21092670; PubMed=11162582; DOI=10.1006/bbrc.2000.4187; Hamada T., Ui-Tei K., Imaki J., Miyata Y.; Wolecular cloning of SCDGF-B, a novel growth factor homologous SCDGF/PDGF-C/fallotein."; Biochem. Biophys. Res. Commun. 280:733-737(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-Aorta;
Liu Y.Q., Wang X.Y., Zhao B., Sheng H., Zhao X.W.,
Xu Y.Y., Ye J., Song L., Gao Y., Zhang C.L., Zhang J., Wei
Cao H.Q., Zhao Y., Liu L.S., Ding J.F., Gao R.L., Wu Q.Y.,
Yuan J.G., Liew C.C., Zhao M.S., Hui R.T.;
Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               370 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  314 - KTGVKGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | | : : | |: |: || || || || || || FKRRGKAKNMALVDIQLDHHERCDCIC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nat. Cell Biol. 3:512-516(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
```

```
RHERVVTISGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDIC
    G., Smith D., Peterson K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local (
       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEDPEDDICKYDFVEVEEPSDGSVL--GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSE 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220 VEDLIKYFNPESWQEDLENWYLDTPRYRGRSY-HDRKSK-VDLDRLNDDAKRYSCTPRNY 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218 SVNIREELKLANVVFFPRCLLVQRCGGNCGCGTVNWRSCTCNSGKTVKKYHEVLQFEPGH 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
TISSUB=Iris;
MEDLINE=22103462; PubMed=12107412;
Wistow G., Berstein S.L., Ray S., Wyatt M.K., Behal A., Touchman J.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42 ESNHLTDLYRRDETIQVKGNGYVQSPRFPNSYPRNLLLTWRLHS-QENTRIQLVFDNQFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PGFCIHYSII---MPQVTETT-----SPSVLPPSSLSLDLLNNAVTAFST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37 EQNGVQD-PRHERVVTISGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161 PGFKIYYSLLEDFQPAAASETNWESVTSSISGVSYNSPSVTDP-TLIADALDKKIAEFDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNLLKEEVKLYSCTPRNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRKVTKKYHEVLOLRP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
  adult human iris for the NEIBank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2004 (TrEMBLrel. 17, Last sequence update)
1-JUN-2004 (TrEMBLrel. 18, Last annotation update)
1-Instancessed growth factor short form (Platelet derived growth factor D, isoform 2) (SCDGF-B).
Name=IEGF; Synonyms=PDGFD; ORFNames=UNQ1899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28;
                       steroid-response factors and similarities with retinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 40.7%; Score 752; DB 2; Length 370; Best Local Similarity 45.3%; Pred. No. 1.6e-52; Matches 148; Conservative 59; Mismatches 92; Indels ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS01180; CUB; 1.
PROSITE; PS50278; PDGF 2; 1.
PROSITE; PS00430; TONB_DEPENDENT REC 1; UNKNOWN 1.
SEQUENCE 370 AA; 42848 MW; D387F48557BB7674 CRC64;
                                                                                                                                                                                                                                           GO, GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008121; P:cell growth and/or maintenance; IEA.
InterPro; IPR000859; CUB.
InterPro; IPR010916; PD growth factor.
InterPro; IPR010916; TONB_Box_N.
Fq.m.; PR00412; CUB; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        364 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314 -KTGVKGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  338 IKRRGRAKTMALVDIQLDHHERCDCIC 364
    sequence tag analysis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                 EMBL, AF335584; AAK38840.1; -. EMBL, AF335584; AAK56136.1; -. EMBL, AY027517; AAK20081.1; -. PIR; JC7591; JC7591.
                                                                                    EMBL; AB033832; BAB18903.1; -. EMBL; AF113216; AAG39287.1; -.
                                                               . Vision 8:185-195(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                       Project: steroid-resp
pigment epithelium."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                               Q9JJS8; 1NTO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9BWV5
                                                                                                                                                                                                                             HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              硆
RRITAR A DO DE RELITAR A DO DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
```

```
"Expressed sequence tag analysis of adult human iris for the NEIBank
Project: steroid-response factors and similarities with retinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: bioinformatics assessment."; bioinformatics assessment."; denome Res. 13:2265-2270(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=22887256; PubMed=12975309; DOI=10.1101/gr.1293003; Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D., Brush J., Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd I Eaton D., Foster J., Grimaldi C., Gu Q., Hass P.E., Heldens S., Lewis L., Liao D., Mark M., Robbie E., Sanchez C., Schoenfeld J., Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vages A., Vandlen R., Watanabe C., Wieand D., Woods K., Xie M.H., Yansura D., Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A., Wood W.I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 364;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AY027518; AAX20082.1; -...
EMBL; BX03045; AAM30645.1; -...
EMBL; AX359116; AAQ89474.1; -...
PIR; JX7591; JX7591.
HSSP; Q9JJS8; INTO.
GO; GO:0008039; F:growth factor activity; IEA.
GO; GO:00080151; P:cell growth and/or maintenance; IEA.
InterPro; IPR000829; CUB.
InterPro; IPR010916; TONB_BOx_N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam, PP00431; CUB; 1.
PROSITE; PS01180; CUB; 1.
PROSITE; PS00430; PS05128; PS05118; PS00430; PROSITE; PS00430; TONB DEPENDENT REC 1; UNKNOWN 1.
SEQUENCE 364 AA; 42166 WW; 245C53E8DDEA9EAC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40.6%; Score 750.5; DB 2; ilarity 45.6%; Pred. No. 2e-52; Conservative 58; Mismatches 88;
                                                                        . Vision 8:185-195(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mouse cDNA sequences.
                                                pigment epithelium.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strausberg R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 145;
```

8

ω

```
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                296
                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                      KYDFVEVEDEBPSDGSVL--GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSI 162
                                                                                  321
                                                                                                                                                                                        281 LANVVFFPRCLLVQRCGGNCGCGTVNWRSCTCNSGKTVKKYHEVLQFEPGHIKRRGRAKT 340
RRDETIQVKGNGYVQSPRFPNSYPRNLLLTWRLHS-QENTRIQLVFDNQFGLEEAENDIC 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-BALB/C;
MEDLINES-12131380; PubMed=11331882; DOI=10.1038/35074593;
LaRochelle W.J., Jeffers M., McDonald W.F., Chillakuru R.A.,
Giese N.A., Lokker N.A., Sullivan C., Boldog F.L., Yang M., Vernet C.,
Blurges C.E., Fernandez E., Deegler L.L., Rittman B., Shimkets J.,
Shimkets R.A., Rorboterg J.M., Lichenstein H.S.;
"PDGF D, A Novel Processe-Accivated Growth Factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        oŧ
                                                                                                                                223 PESWQEDLENMYLDTPRYRGRSY-HDRKSK-VDLDRLNDDAKRYSCTPRNYSVNIREELK
                                   I---MPQVTETT------SPSVLPPSSLSLDLLNNAVTAFSTLEELIRYLE
                                                                                                                    PDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNLLKEEVKLYSCTPRNFSVSIREELK
                                                                                                                                                                 RIDII FWPGCLLVKRCGGNCACCLHNCNECQCVPRKVTKKYHEVLQLRP---KTGVKGLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-CS7BL/63; TISSUE-Whole body;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=C57BL/6J; TISSUE=Whole body;
The FANTOM Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
"Analysis of the mouse transcriptome based on functional annotation
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                         092517; Q9DLB;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Platelet-derived growth factor D (Mus musculus 18-day embryo whole body cDNA, RIKEN full-length enriched library, clone:1110003109 product:platelet-derived growth factor D).
                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN=CS7BL/6J; TISSUE=Whole body;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                 370 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        [5]
SEQUENCE FROM N.A.
STRAIN=CS7BL/6J; TISSUE=Whole body;
                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                 322 KSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                             :| |: |: || || || || 341 MALVDIQLDHHERCDCIC 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nature 409:685-690(2001)
                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                             Name=Pdgfd
 45
                       105
                                                                     163
                                                                                                                    205
                                                                                                                                                                                                                                                                                                 Q92517
                      à
                                           셤
                                                                     ð
                                                                                      셤
                                                                                                                 ò
                                                                                                                                        g
                                                                                                                                                                 ò
                                                                                                                                                                                   셤
                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                      유
```

```
RC STRAIN-C57BL/GAT. TISSUE=Whole body;
RAdachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
RA Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
RA Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
RA Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
RA Hanagaki T., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
RA Aswai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
RA Matsuyama T., Miyazaki A., Nishi K., Nomura K., Sakai C., Sakai K.,
RA Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
RA Sogabe Y., Suzuki H., Tagawa A., Takahashi F., Tanaka T.,
RA Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
RA Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
RA Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
RA Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
RASSP (QAJUSS); BAB22735.2; -
DR RENEL; ARCOGO Lo the EMBL/GenBank/DDBJ databases.
BR MGD; MG1:1919035; Pdgfd.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0005615; C:extracellular space; TAS.
BR SMART; SM0042; CUB; 1.
BR SMART; SM0042; CUB; 1.
BR ROSITE; PS01180; CUB; 1.
BR ROSITE; PS01180; CUB; 1.
BR ROSITE; PS0278; PDGF 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TSKGNHIRIRFVSDEYFPSEPGFCIHYSII---MPQVTETT------SPSV 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81
              Σ
                                                                                                                  genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26 QRASIKALRNAN----LRRDESNHLTDLYQREENIQVTSNGHVQSPRFPNSYPRNLLLTW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LPPSSLSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGS--VLGRWCGSGTVPGKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VNIJNILIKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORTGTRAESNLSSKLOLSSDKEONGVODPRHERVVTISGNGSIHSPKFPHTYPRNMVLVW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaрв
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y., Inbarantisation and subtraction of cap-trapper-selected cDNAs to Genome Full-length cDNA libraries for rapid discovery of new genes Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                STRAIN=C57BL/64); TISSUE=Whole body;
Shibate K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P., Shibate K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Katsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsunnoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa W., Izawa M., Ohara E., Watshiwagi K., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Rishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Furik integrated sequence analysis (RISA) system-184-format Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CVPRKVTKKYHEVLQLRP---KTGVKGLHKSLTDVALEHHEECDCVC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40.4%; Score 746.5; DB 2;
43.5%; Pred. No. 4.3e-52;
ive 63; Mismatches 102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 43.59
Matches 151; Conservative
                                                                                                                                                                                                                          FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A
```

```
Bukaryota, Metazoa, Chordata,
Mammalia, Butheria, Rodentia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00431; CUB; 1.
   musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VNL 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
NRP1_BRARE
ID NRP1_BRARE S
AC Q8QFX6; Q8AXP1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52 ISGNGSIHSPKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEV 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           112 BEPSDGS--VLGRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSII---MPQ 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      167 VTETT-----SPSVLPPSSLSLDLLNNAVTAFSTLEELIRYLEPDRWQVD 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LDSLYKPTWQLLGKAFLYGKKSKVVNLNLLKEEVKLYSCTPRNFSVSIREELKRTDTIFW 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PGCLLVKRCGGNCACCLHNCNECQCVPRKVTKKYHEVLQLRP---KTGVKGLHKSLTDVA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             238 PRCLLVQRCGGNCGCGTVNWKSCTCSSGKTVKKYHEVLKFEPGHPKRRNRAKNMALVDIQ 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 VIGNGHVQSLAFPNSYPRNLLITWRLHS-QEKTRIQLAFDHQFGLEEAENDICRYDFVEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                  Eukaryotă, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36.8%; Score 679.5; DB 2; Length 300; 44.6%; Pred. No. 9e-47; ive 58; Mismatches 83; Indels 27
300 AA; 34616 MW; 716C873C9C01C0C6 CRC64;
                                                                                                                                                05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       261 AA
                                                                                                                300 AA
                                                                                                                                                                                                         Iris-expressed growth factor (Fragment).
Name=PDGFD;
                                                                                                                PRT;
                                                                                                                                                                                                                                                Oryctolagus cuniculus (Rabbit)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 44.6%
Matches 135; Conservative
                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |:|
LDH 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LEH 331
                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pdgfd protein.
Name=Pdgfd;
                                                                                                                                                   05-JUL-2004
05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8K2L3
Q8K2L3;
                                                                       RESULT 13
06609H
AC 0609H
AC 0609H
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 05-JU
DT 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OBKZL3
ID AC
ODT
DT OOI
ODT OOI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

```
MEDINE-22388257; PubMed=12477921; DOI=10.1073/pnas.242603899;
Strausberg R.L., Feingold B.A., Grouse L.H., Derge J.G.,
Altaener R.D., Colline F.S., Wagner L., Schaefer C.F., Schuler G.D.,
Altachul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,
Altachul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Altachul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Batchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Carainci P., Prange C.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarathe P.H.,
A. Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A. Halton B.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
A. Halton B.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Jones S.J., Marra M.J.,
Jones S.J., Marra M.A.,
T "Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76 RLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEPSDGS--VLGRWCGSGTVPGKQ 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134 TSKGNHIRIREVSDEYFPSEPGFCIHYSII---MPQVTETT------SPSV 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              176 LPPSSLSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKV 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              201 IDP-TLIADALDKTVAEPDTVEDLLKHFNPVSWQDDLENLYLDTPHYRGRSY-HDRKSKG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26 QRASIKALRNAN----LRRDESNHLTDLYQREENIQVTSNGHVQSPRFPNSYPRNLLLTW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16 ORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHSPKFPHTYPRNMVLVW
Craniata, Vertebrata, Euteleostomi;
Sciurognathi, Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Straubberg R.; Straubberg R.; Straubberg R.; Straubberg R.; Straubberg R.; Submitted (JUN 2002) to the EMBL/GenBank/DDBJ databages. EMBL; BC030896; AAH30896.1; -. HSSP; Q9JOSB; INTO. MGD; MGI.1919035; Pdgfd. GO; GO:0005615; C:extracellular space; TAS. GO; GO:0050730; P:requiation of peptidyl-tyrosine phosphoryla. InterPro; IPR000859; CUB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23.8%; Score 440.5; DB 2; Length 261; 38.7%; Pred. No. 1.8e-27; ive 49; Mismatches 73; Indels 27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SMART, SM00042; CUB; 1.
PROSITE; PS01180; CUB; 1.
SEQUENCE 261 AA; 30228 MW; 2EEC3F6373A52D09 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         923 AA
                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=FVB/N; TISSUE=Mammary tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN=FVB/N; TISSUE=Mammary tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
```

```
용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 엄
                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                      Shoji W., Tawarayama H.;

The cloning and expression of neuropilin-1.";

Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.

Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.

Le retain reuronal circuits and in organogenesis outside the nervous certain neuronal circuits and in organogenesis outside the nervous system. It mediates the chemorepulsant activity of semaphorins.

Regulates angiogenesis through a VEGF-dependent pathway.

SUBCLOMENORMENTAL STAGE: Expressed both maternally and zygotically.

Maternal transcripts are widely expressed until the early gastrula stage, then become localized to the yolk syncytial layer. During sommatogenesis and later stages of development, expression occurs mainly in neuronal and vascular tissues.

SIMILARITY: Contains 2 CUB domains.

SIMILARITY: Contains 2 FG/B type C domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last sendence update)
No-JUL-2004 (Rel. 44, Last annotation update)
Neuropilin-1 precursor (znrpl).
Name=nrpl; Synonyms=np-1;
Brachydanio rerio (Zebrafish) (Danio rerio).
Busaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                            SEQUENCE FROM N.A., FUNCTION, AND DEVELOPMENTAL STAGE.
STRAIN=AB; TISSUE=Embryo;
PubMed=12142468; DOI=10.1073/pnas.162366299;
Lee P., Goishi K., Davidson A.J., Mannix R., Zon L., Klagsbrun M.;
"Neuropilin-1 is required for vascular development and is a mediator
of VEGF-dependent angiogenesis in zebrafish.";
Proc. Natl. Acad. Sci. U.S.A. 99:10470-10475(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Angiogenesis; Glycoprotein; Neurogenesis; Receptor; Repeat; Signal;
Transmembrane.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Potential.
Neuropilin-1.
Extracellular (Potential)
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP, 014786; IKEX.
ZFIN; ZDB-GRNE-030519-2; nrpl.
InterPro; IPR000859; CUB.
InterPro; IPR000421; FA58 C.
InterPro; IPR008979; Gal bind like.
InterPro; IPR008998; MAM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PERM; PRO0431; CUB; 2.
PERM; PRO0431; CUB; 2.
PERM; PRO0622; MAM; 1.
SMART; SM00042; CUB; 2.
SMART; SM00131; PA58C; 2.
SMART; SM00131; PA58C; 2.
PROSITE; PS01180; CUB; 2.
PROSITE; PS01180; CUB; 2.
PROSITE; PS00186; FA88C_1; 1.
PROSITE; PS001285; PA58C_1; 1.
PROSITE; PS00040; MAM 1: 1.
PROSITE; PS00040; MAM 1: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; AY064213; AAL40862.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AB088776; BAC53657.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
923
856
877
                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIGNAL
```

```
61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEVEEPSD--GS 118
                                                                                                                                                                                                                                                                                                                                                                                                                          119 VLGRWCGSGTVPGKQTSKGNHIRIRPVSDEYFPSEPGFCIHYSIIM--PQVTE--TTSPS 174
                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                   39
                                                                                                                                                                                                                                                                                                                                                                                                   96
                                                                                                                                                                                                                                                                                                                                           40 PGYPVSYYPSQKCIWVITAPGPNQRILINFNPHFDLEDRE---CKYDYVEVRDGVDENGQ
                                                                                                                                                                                                                                                                                                                         1 MLLIGLLLISALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                   58; Gaps
                                                                                                        226 Probable.

422 By similarity.

581 By similarity.

148 N'linked (GlCNAC. .) (Potential).

259 N'linked (GlCNAC. .) (Potential).

230 T -> S (in Ref. 2).

317 K -> E (in Ref. 2).

454 T -> S (in Ref. 2).

463 L -> M (in Ref. 2).

463 L -> M (in Ref. 2).

463 C -> M (in Ref. 2).

463 C -> M (in Ref. 2).

463 C -> D (in Ref. 2).

47 G -> D (in Ref. 2).
                                                                                                                                                                                                                                                                        10.9%; Score 201; DB 1; Length 923; 27.9%; Pred. No. 2.2e-07; ive 31; Mismatches 74; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          175 VLP-----PSSLSLDL-----LNNAVTAFSTLEELIRYLEPD 206
Cytoplasmic (Potential).
                                  F5/8 type C
F5/8 type C
                                                                                    Probable.
Probable.
                                                                       Probable.
            99
                                                                                                                                                                                                                                                                                                   63; Conservative
                                                                                                                                                                                                                                                   923 AA;
                                                                                                                                                                                                                                                                                      Similarity
 CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                           CARBOHYD
                                                                                      DISULFID
                                                                                                                         DISULFID
                                                                                                                                                                                                                                                                         Query Match
                                                                         DISULFID
                                                                                                            DISULFID
                                                                                                                                     DISULFID
                                                                                                                                                  CARBOHYD
                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                      Best Local
                                               DOMAIN
                         DOMAIN
                                      DOMAIN
```

Search completed: September 3, 2005, 19:29:42 Job time: 115.5 secs

Thu

```
241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요 - 상
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43, Appl
2, Appli
2, Appli
5, Appli
35, Appli
2, Appli
2, Appli
2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2, Appli
118, App
2, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 43, Appl
Sequence 35, Appl
                                                                                                     3, 2005, 19:19:05; Search time 30 Seconds (without alignments) 858.464 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                              US-09-818-943-2
1848
1 MLLIGILLITSALAGQRTGT......DVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                     513545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Issued Patents AA:*

(cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
(cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
(cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
(cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
(cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
(cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
(cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-468-647A-101
US-09-468-647A-110
US-00-468-647A-130
US-10-139-583-2
US-09-468-647A-118
US-09-468-647A-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-564-5950-35
US-09-766-968-43
US-09-003-4
US-10-139-583-43
US-09-040-2200-2
US-09-457-066-2
US-09-56-686-2
US-09-56-686-2
US-09-56-686-2
US-09-56-686-2
US-09-56-686-2
US-09-56-686-2
US-09-56-686-2
US-09-68-2
US-09-68-2
US-09-68-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -09-468-647A-103
-09-468-647A-120
-09-468-647A-122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-564-595D-57
US-09-564-595D-54
US-09-564-595D-56
                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                              513545 segs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                      protein search, using sw model
                                                                                                                                                                                                                                                         BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                       length: 0
length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                 Copyright
                                                                                                         September
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      126429
                                                                                                                                                                                                                                                                                                                                                                                       sed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                        ı
                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB
Maximum DB
                                                                      OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database :
                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
No.
```

Sequence 55, Appl Sequence 37, Appl Sequence 2, Appli Sequence 37, Appli Sequence 37, Appli Sequence 5, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 11, Appli Sequence 4, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli Sequence 11, Appli			IMPQVTETTSPSVLPPSS 180
US-09-564-595D-55 US-09-457-066-37 US-09-546-284-2 US-09-564-595D-2 US-09-706-968-37 US-09-808-972-2 US-09-813-033-5 US-09-438-046-8 US-10-139-881-37 US-10-139-881-37 US-10-039-847A-2 US-09-468-647A-111 US-09-468-647A-11	ALIGNMENTS	S7066 spher S. G. G. G. Howolog ZVEGF3 COR HOWOLOG ZVEGF3 Version 3.0 Score 1848; DB 4; Pred. No. 8.2e-195; O; Mismatches 0; Hill	NHIRIREVSDEYFPSEPGFCIHYSI
0.00		ion US/094570 in arles E. cor, Christophu, r, Kimberly E cor, Debra G. GROWTH FACTOR ON 1999-12-07 i: 50 or Windows Veri i: 50 or Windows Veri r Windows Veri luus 100.0%; E vative 0; TSALAGORIGIRAL TSALAGORIGIRA TSALAGORIGIRAL TSALAGORIGIRAL TSALAGORIGIRAL TSALAGORIGIRAL TSA	KOTSKG
88 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		SULT 1 -09-457-066-43 Sequence 43, Application US/094 Patent No. 6432673 GENERAL INFORMATION: APPLICANT: Hart, Charles B. APPLICANT: Hart, Charles B. APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Sheemaker, Kimberly APPLICANT: Best Names W. ITILE OF INVENTION: GROWTH FACTORRENT FILING DAIRS: 1999-12-1 NUMBER OF SEQ ID NOS: 50 CURRENT FILING DAIRS: 1999-12-1 NUMBER OF SEQ ID NOS: 50 LENGTH: 345 LYPE: PRT ORGANISM: Mus musculus -09-457-066-43 MALCHELLITSALAGORTG	GRWCGSGTVPG
1019 752 752 752 752 752 752 752 754 756 756 756 757 757 757 757 757 757 757		SULT 1 Sequence 43, A Sequence 43, A Sequence 43, A Sequence 43, A Sequence 43, A Sequence 43, A Sequence 43, A Sequence 43, A Sepulcant H APPLICANT: B APPLICANT	121
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		RESULT 1 US-09-457 Sequence Se	QQ

셤

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLGLLLLTSALAGGRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                        PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                1 MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                            Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OF BONE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/09823033
Sequence 4, Application US/09823033
Sequence 7, Second Color Charles E.
APPLICANT: Hart, Charles E.
TITLE OF INVENTION: METHODS FOR PROMOTING GROWTH OF TITLE OF INVENTION: LIGAMENT AND CARTILAGE
FILE REFERENCE: 00-12
CURRENT APPLICATION NUMBER: US/09/823,033
CURRENT FILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 5
SOFTWARE: FASELSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.0%; Score 1848; DB 4; Best Local Similarity 100.0%; Pred. No. 8.2e-195; Matches 345; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                            100.0%; Score 1848; DB 4;
100.0%; Pred. No. 8.2e-195;
tive 0; Mismatches 0;
PRIOR APPLICATION NUMBER: US/09/541,752
PRIOR FILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 50
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 43
LENGTH: 345
TYPEP. nom
                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                            ; ORGANISM: Mus musculus
US-09-706-968-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                       Matches 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 345
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
US-09-823-033-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-823-033-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYPPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MILLGILLITSALAGORTGTRAESNLSSKLOLSSDKEONGVODPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 1848; DB 4;
100.0%; Pred. No. 8.2e-195;
cive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Hart, Charles E.
APPLICANT: Piddington, Christopher S.
APPLICANT: Sheppard, Paul O.
APPLICANT: Shoemaker, Kimberly E.
APPLICANT: Gilbertson, Debra G.
APPLICANT: West, James W.
TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF3
FILE REFERENCE: 98-601
CURRENT APPLICATION NUMBER: US/09/706,968
                                                                                                                 Sequence 35, Application US/09564595D
Patent No. 649568
GENERAL INFORMATION:
APPLICANT: Glibert, Teresa
APPLICANT: Hart, Charles E.
APPLICANT: Sheppard, Paul O.
TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF4
FILE REFERENCE: 99-19
                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/564,595D
CURRENT FILING DATE: 2000-05-03
PRIOR FILING DATE: 1999-05-03
PRIOR FILING DATE: 1999-05-03
PRIOR FILING DATE: 1999-11-10
PRIOR APPLICATION NUMBER: US 60/164,463
PRIOR APPLICATION NUMBER: US 60/180,169
PRIOR APPLICATION NUMBER: US 60/180,169
PRIOR FILING DATE: 2000-02-04
NUMBER: PASCEN FILING DATE: 2000-03-04
SEQ ID NOS: 57
SEQ ID NOS: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 43, Application US/09706968
Patent No. 6528050
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.0
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
CRGANISM: Mus musculus
US-09-564-595D-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Gao, Zeren
APPLICANT: Hart, Char
                                                                                                          US-09-564-595D-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
US-09-706-968-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
```

В

요 ò a ઠે g ò g ò a

à

9 9

180 180 240

120

g

ઠે ద

ઠે 셤 ઠે

```
Sequence 2, Application US/09040220D
                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                              US-09-040-220D-2
                                                                                                                                                                                                                                                                                                                 LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 345
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-457-066-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                        LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                 241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PKFPHTYPRNMVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 LSLDLLNNAVTAFSTLEBLIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 LKEEVKLYSCTPRNFSVSIRBELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
181 LSLDLIANAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLIGLILITSALAGGRIGTRAESNISSKLOLSSDKEONGVODPRHERVVIISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                    LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 1848; DB 4; Length 345; 100.0%; Pred. No. 8.2e-195; ive 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                            VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                          301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZVEGF3
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Hart, Charles E.
APPLICANT: Hart, Charles E.
APPLICANT: Sheppard, Paul O.
APPLICANT: Sheppard, Paul O.
APPLICANT: Sheppard, Paul O.
APPLICANT: Sheppard, Paul O.
APPLICANT: Shepmard, Paul O.
APPLICANT: Gilbertson, Debra G.
APPLICANT: Gilbertson, Debra G.
APPLICANT: Gilbertson, Debra G.
APPLICANT: West, James W.
TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVE FILE REFERENCE: 98-60
CURRENT APPLICATION WUMBER: US/10/139,583
CURRENT APPLICATION NUMBER: 09/457,066
PRIOR FILING DATE: 1999-12-07
NUMBER OF SEQ ID NOS: 50
SEQ ID NO 43
LENGTH: 345
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 43, Application US/10139583
Patent No. 6814965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                              US-10-139-583-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-139-583-43
                                                                                                                                                      241
                                                                                                                                                                                                                                            301
                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
```

ઠે 셤 ò Q ò 셤 ઠે g ઠે 요 ò g US-09-040-220D-2

```
Patent No. 6391311
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Ferrara, Napoleone
APPLICANT: Ferrara, Napoleone
APPLICANT: FULO, Sophia S.
TITLE OF INVENTION: NOTEL POLYPEPTIDES HAVING HOMOLOGY TO VASCULAR
TITLE OF INVENTION: RODOTHELLAL CELL GROWTH FACTOR AND BONE MORPHOGENETIC
TITLE OF INVENTION: PROTEIN 1 AND NUCLEIC ACIDS ENCODING SAME, THEIR USES,
TITLE OF INVENTION: AND PROCESSES FOR THEIR PRODUCTION
FILE REFERENCE: P1122
CURRENT APPLICATION NUMBER: US/09/040,220D
CURRENT APPLICATION NUMBER: US/09/040,220D
NUMBER OF SEQ ID NOS: 8
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LPLDLLINNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGKAFVFGRKSRVVDLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MILLGLLLITSALAGORTGTRAESNLSSKLOLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90.2%; Score 1667; DB 4; Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 VTKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Gao, Zeren
APPLICANT: Gao, Zeren
APPLICANT: Gao, Zeren
APPLICANT: Hart, Charles E.
APPLICANT: Shognard, Paul O.
APPLICANT: Shoemaker, Kimberly E.
APPLICANT: Gilbertson, Debra G.
APPLICANT: West, James W.
TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF3
FILE REFERENCE: 98-60
CURRENT FILING DATE: 1999-12-07
NUMBER OF SEQ ID NOS: 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90.2%; Score 1667; DB 3;
87.0%; Pred. No. 7.4e-175;
ive 27; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Sequence 2, Application US/09457066; Patent No. 6432673; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 87.09
Matches 300; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Homo sapiens
US-09-457-066-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
```

임 ò ద õ 셤 à g ŝ 엄 ò g

```
241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGCNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GRWCGSGTVPGKQISKGNQIRIREVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVERPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MILLIGILLITISALAGORTGTRAESNISSKIQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 90.2%; Score 1667; DB 4; Length 345; Best Local Similarity 87.0%; Pred. No. 7.4e-175; Matches 300; Conservative 27; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345
                                                                        345
                                                                                                                                                                                                                                                APPLICANT: Gilbertson, Debra G.
APPLICANT: Hart, Charles E.
TITLE OF INVENTION: METHODS FOR PROMOTING GROWTH OF BONE,
TITLE OF INVENTION: LICAMENT AND CARTILAGE USING ZVECF4
FILE REPERENCE: 00-28
CURRENT APPLICATION NUMBER: US/09/540,224
CURRENT APPLICATION NUMBER: US 60/180,169
EARLIER APPLICATION NUMBER: US 60/180,169
EARLIER FILING DATE: 2000-03-04
NUMBER OF SEQ ID NOS: 9
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO SEQ ID NOS: 1
LENGTH: 345
TYPE: PRT
                                                   301 VTKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 33, Application US/09564595D
Sequence 33, Application US/09564595D
Sequence No. 6495668
GENERAL INFORMATION:
APPLICANT: Gilbert, Teresa
APPLICANT: Hart, Charles E.
APPLICANT: Sheppard, Paul O.
TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF4
FILE REFERENCE: 99-19
CURRENT APPLICATION NUMBER: US/09/564,595D
CURRENT PILING DATE: 2000-05-03
FRIOR APPLICATION NUMBER: US 09/304,216
FRIOR APPLICATION NUMBER: US 09/304,463
FRIOR FILING DATE: 1999-05-03
FRIOR FILING DATE: 1999-01-10
                                                                                                                                                              US-09-540-224-5
; Sequence 5, Application US/09540224
Patent No. 6468943
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Homo sapiens
US-09-540-224-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
US-09-564-595D-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                              ö
                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                    GRWCGSGTVPGKQTSKGNHIRIREVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                 121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHÝNIVMPQFTEAVSÞSVLÞÞSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                   LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRWCGSGTVPGKQISKGNQIRIREVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 IKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                  1 MSLFGLLLTSALAGQRQCTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                     1 MSLFGLLLLTSALAGORQCTQAESNLSSKFQFSSNKGQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MLLLGLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                             LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MILLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .;
0
                              ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-265-686-2
; Sequence 2, Application US/09265686
; Sequence 2, Application US/09265686
; GENERAL INFORMATION:
; APPLICANT: Ferrara, Napoleone
; APPLICANT: Kuo, Sophia S.
; TITLE OF INVENTION: POLYPEPTIDES HOMOLOGOUS TO VEGF AND BMPI
; FILE REFERENCE: P1122P2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 90.2%; Score 1667; DB 4; I
Best Local Similarity 87.0%; Pred. No. 7.4e-175;
Matches 300; Conservative 27; Mismatches 18;
    No. 7.4e-175;
smatches 18;
87.0%; Pred. n...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/265,686
CURRENT FILING DATE: 1999-03-10
PRIOR APPLICATION NUMBER: US 09/040,220
PRIOR FILING DATE: 1998-03-17
PRIOR FILING DATE: 1998-11-02
NUMBER OF SEQ ID NOS: 8
LENGTH: 345
                              Matches 300; Conservative
      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-265-686-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                   241
      Best Local
```

a

ò g ò

õ 셤 ò g

ò

ö

9 9 120 180 180 240

```
PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDFEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TYPE: PRT
; ORGANISM: Human
US-09-723-749-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                  181
                                                                                                                                                                          241
    61
                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                61
                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                          g
                                                                              셤
                                                                                                          ð
                                                                                                                                           g
                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                         ò
                                                                                                                                                                         ò
                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                            PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                           GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                        121 GRWCGSGTVPGKQISKGNQIRIRFVSDBYPPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                          LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                           LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                     1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                     1 MSLFGLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                          Gaps
                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jesupance 2, Application US/09706968

Patent No. 6528050

GENERAL INFORMATION:

APPLICANT: Gao, Zeren

APPLICANT: Hart, Charles E.

APPLICANT: Sheppard, Paul O.

APPLICANT: Sheppard, Paul O.

APPLICANT: Sheppard, Rimberly E.

APPLICANT: Sheppard, Nebra G.

TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF3

TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF3

TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF3

CURRENT PILING DATE: 2000-11-06

PRIOR FILING DATE: 2000-03-31

NUMBER OF SEQ ID NOS: 50

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 2

LENGTH: 345
                                                                                                                                             90.2%; Score 1667; DB 4;
87.0%; Pred. No. 7.4e-175;
ive 27; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 90.2%; Score 1667; DB 4; Best Local Similarity 87.0%; Pred. No. 7.4e-175; Matches 300; Conservative 27; Mismatches 18;
PRIOR APPLICATION NUMBER: US 60/180,169
PRIOR FILING DATE: 2000-02-04
NUMBER OF SEQ ID NOS: 57
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 33
LENGTH: 345
                                                                                                                                           Query Match
Best Local Similarity 87.03
Matches 300; Conservative
                                                                                    TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , ORGANISM: Homo sapiens
US-09-706-968-2
                                                                                                                  US-09-564-595D-33
                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                              심
                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                        LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                    241 LTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PRFPHTYPRNTVLVWRLVAVERVWMIQLTFDERFGLEDPEDDICKYDFVEVEEFSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 ITEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL
                                                                        GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                    GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVMPQFTEAVSPSVLPPSA
                                                                                                                                                                                                         LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MILLGILLITSALAGORTGTRAESNLSSKLOLSSDKEQNGVODPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Ferrara, Napoleone
APPLICANT: Ferrara, Napoleone
TITLE OF INVENTION: POLYEPTIDES HOMOLOGOUS TO VEGF AND BMPI
FILE REFERENCE: P1122P2D1
CURRENT APPLICATION NUMBER: US/09/723,749
CURRENT FILING DATE: 2000-11-27
FRIOR PAPLICATION NUMBER: US 09/265,686
PRIOR FILING DATE: 1999-03-10
PRIOR FILING DATE: 1998-03-17
PRIOR PAPLICATION NUMBER: US 09/184,216
PRIOR PILING DATE: 1998-11-02
NUMBER OF SEQ ID NOS: 8
SEQ ID NO 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 345;
                                                                                                                                                                                                                                                                                                                                                                                             301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                         VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
90.2%; Score 1667; DB 4; Length 3
Best Local Similarity 87.0%; Pred. No. 7.4e-175;
Matches 300; Conservative 27; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 2, Application US/09723749; Patent No. 6620784; GENERAL INFORMATION:
```

```
241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                   à
                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GRWCGSGTVPGKQISKGNQIRIRFVSDEYFPSEPGFCIHYNIVWPQFTEAVSPSVLPPSA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 LTEEVRLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSLFGLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MLLLGLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                       Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10. Application US/09468647A
; Sequence 10. Application US/09468647A
; Sequence 10. Application US/09468647A
; GENERAL INFORMATION:
    APPLICANT: Gordon, Robert D
    APPLICANT: You, Jeffery R
    APPLICANT: You, Jeffery R
    APPLICANT: Dijkmans, Josiena J.H.
    APPLICANT: Dijkmans, Josiena J.H.
    APPLICANT: Dhanaraj, Sridevi N
    APPLICANT: Dhanaraj, Sridevi N
    APPLICANT: Na. Jean
    APPLICANT: Jean
    PRIOR APPLICATION NUMBER: US 60/124,967
    PRIOR PILING DATE: 1999-03-18
    PRIOR PILING DATE: 1999-11-08
    NUMBER OF SEQ ID NOS: 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301 VIKKYHEVLOLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                    GENERAL INFORMATION:

APPLICANT: Hart, Charles E.

APPLICANT: Gilbertson, Debra G.

TITLE OF INVENTION: METHODS FOR PROMOTING GROWTH OF BONE,

TITLE OF INVENTION: LIGAMENT AND CARTILAGE

FILE REFRENCE: 00-12

CURRENT APPLICATION NUMBER: US/09/823,033

CURRENT FILING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 5

SEQ ID NO: 5

SEQ ID NO: 5

LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                     Query Match 90.2%; Score 1667; DB 4; 1
Best Local Similarity 87.0%; Pred. No. 7.4e-175;
Matches 300; Conservative 27; Mismatches 18;
              Sequence 2, Application US/09823033
Patent No. 6663870
                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-468-647A-101
US-09-823-033-2
                                                                                                                                                                                                                                                                                                                                               US-09-823-033-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                               61 PRFPHTYPRNTVLVWRLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LKEEVKLYSCTPRNPSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 LTEEVRLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK 300
                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                   1 MSLFGLLLLTSALAGOROGTQAESNLSSKFOFSSNKEONGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                    PKFPHTYPRNMVLVWRLVAVDENVRIQL/TFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MSLFGLLLLTSALAGGRQGRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MLLLGLLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                           1 MLLLGLLLLTSALAGORTGTRAESNLSSKLOLSSDKEONGVODPRHERVVTISGNGSIHS
                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                               .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                 Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VIXKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INC. 8735393

GENERAL INC. 8735393

APPLICANT: Gordon, Robert D

APPLICANT: Sprengel, Jorg J

APPLICANT: Yon, Jeffery B

APPLICANT: Dijkmans, Josiena J.H.

APPLICANT: Dijkmans, Josiena J.H.

APPLICANT: Dhanaraj, Sridevi M

APPLICANT: Dhanaraj, Sridevi M

TITLE OF INVENTION: YASCULAR ENDOTHELIAL GROWTH FACTOR-X

FILE REFERENCE: B0192.70011US00

CURRENT APPLICATION NUMBER: US/09/468,647A

FILE REPERENCE: 1999-12-21

PRIOR PILING DATE: 1999-12-22

PRIOR PILING DATE: 1999-12-22

PRIOR PILING DATE: 1999-03-18

PRIOR FILING DATE: 1999-01-108

PRIOR FILING DATE: 1999-01-108
                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Score 1667; DB 4;
; Pred. No. 7.4e-175;
27; Mismatches 18;
                                                                                                                                                               90.2%; Score 1667; DB 4;
87.0%; Pred. No. 7.4e-175;
iive 27; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 110, Application US/09468647A Patent No. 6783953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90.2%;
87.0%;
SOFTWARE: Patentin version 3.2
SEQ ID NO 101
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin version 3.2
SEQ ID NO 110
LENGTH: 345
                                                                                                                                                             Query Match
Best Local Similarity 87.0%
Matches 300; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 87.0%
Matches 300; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 130
                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens
US-09-468-647A-110
                                                                                                          US-09-468-647A-101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-468-647A-110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
```

Search completed: September 3, 2005, 19:31:44 Job time: 31 secs

ή. •.

i

٠.

.

wash and the fiblid sing

OLESH MANTER JEHOLD SIHL

```
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 43, App.
Sequence 7, Appli
Sequence 4, Appli
Sequence 7, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Appli
Sequence 2, Appli
Sequence 7, Appli
Sequence 35, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Appli
Appli
                                                                                           7; Search time 109.5 Seconds (without alignments) 1240.813 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                           US-09-818-943-2
1848
1 MLLIGLILLTSALAGQRTGT......DVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Cgn2_6/ptodata/2/pubpaa/USO7_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO7_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO6_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO6_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO6_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO7_NEW_PUB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO9_NEW_PUB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO9_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO10_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO10_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO10_PUBCOMB.ppp:*
| Cgn2_6/ptodata/2/pubpaa/USO10_NEW_PUB.ppp:*
version 5.1.6
- 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-823-033-4
US-09-818-943-2
US-09-818-2094-7
US-09-818-31-35
US-10-139-583-43
US-10-139-583-43
US-10-303-9978-7
US-10-4432-4
US-10-664-432-4
                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters
                                                                                                                                                                                                                                                                               1774312 segs, 393823214 residues
                                                                                               3, 2005, 19:21:57
                                                                                                                                                                                                                                                                                                                                                                                               Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                 sw model
                                                                                                                                                                                                                               BLOSUM62
Gapop 10.0 , Gapext 0.5
GenCore (c) 1993 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       score greater than or equal to
and is derived by analysis of
                                                              protein search, using
                                                                                                                                                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
               Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Published
                                                                                               September
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing:
                                                                                                                                                                                                                                                                                                                                                  9e.q
                                                                                                                                                                              Perfect score:
                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1848
1848
11848
11848
11848
11848
11848
                                                              OM protein
                                                                                                                                                                                                                                                                                                                                                  Minimum DB
Maximum DB
                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1264337
                                                                                               ë
ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Result
No.
                                                                                               Run
```

```
12 1848 100.0 345 16 US-10-877-623-35 Sequence 35, Appli 186 100.0 345 17 US-10-938-35 Sequence 4, Appli 196 100.0 345 20 US-11-021-088-43 Sequence 43, Appli 167 90.2 345 9 US-09-803-35 Sequence 35, Appli 167 90.2 345 9 US-09-923-955-4 Sequence 4, Appli 167 90.2 345 9 US-09-923-956-358-395-4 Sequence 48, Appli 20 1667 90.2 345 9 US-09-978-258-488 Sequence 48, Appli 22 1667 90.2 345 9 US-09-978-258-488 Sequence 48, Appli 22 1667 90.2 345 9 US-09-978-258-488 Sequence 48, Appli 22 1667 90.2 345 9 US-09-978-258-488 Sequence 48, Appli 22 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 24 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 24 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 26 167 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 28 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 29 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 30 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 31 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 32 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 32 1667 90.2 345 10 US-09-978-1824-88 Sequence 48, Appli 31 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 32 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 32 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-99-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-98-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-98-8344-88 Sequence 48, Appli 36 1667 90.2 345 10 US-09-98-8344-88 Sequence
```

ALIGNMENTS

120 120 180

ద ò g ò 셤

ò

```
PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PKFPHTYPRNMYLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFPEDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LSLDLLANAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MLLIGLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVODPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                 DNA CODING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
          APPLICANT: BASE, Karin
APPLICANT: AASE, Karin
APPLICANT: AASE, Karin
APPLICANT: LEE, Xuri
APPLICANT: LEE, Xuri
APPLICANT: UUTELA, Marko
APPLICANT: UUTELA, Marko
APPLICANT: UUTELA, Marko
APPLICANT: UUTELA, Marko
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: HELDIN, Carl-Henrik
APPLICANTON: THEREFOR, AND USES THEREOF
ITLE OF INVENTION: THEREFOR, AND USES THEREOF
ITLE OF INVENTION: THEREFOR, AND USES THEREOF
ITLE OF INVENTION NUMBER: US/09/852,209A
CURRENT FILING DATE: 1999-05-30
PRIOR PELING DATE: 1999-12-03
PRIOR PELING DATE: 1999-12-18
PRIOR PILING DATE: 1999-05-21
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1848; DB 9;
Pred. No. 1.2e-166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Gilbert, Teresa
APPLICANT: Gilbert, Charles E.
APPLICANT: Sheppard, Paul O.
TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZUEGF4
FILE REPERBNCE: 99-19
CURRENT APPLICATION NUMBER: US/09/876,813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Scc. 100.0%; Pred. No. 1.... 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 35, Application US/09876813 Publication No. US20040002140A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.
Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT ORGANISM: Murinae gen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-876-813-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-852-209A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ठ
                                                                                                                                                                                                                                                                                                                                                                                                             | Sequence 2, Application US/09818943
| Sequence 2, Application US/09818943
| Patent No. US20020049987A1
| GENERAL INFORMATION:
| APPLICANT: ELI, Xuri
| APPLICANT: ELI, Kuri
| APPLICANT: LI, Hong
| TITLE OF INVENTION: NON-HUMAN TRANSGENIC ANIMALS EXPRESSING PLATELET-DERIVED GROWTH F
| TITLE OF INVENTION: NON-HUMAN TRANSGENIC ANIMALS EXPRESSING PLATELET-DERIVED GROWTH F
| TITLE OF INVENTION: NON-HUMAN TRANSGENIC ANIMALS EXPRESSING PLATELET-DERIVED GROWTH F
| FILE REFERENCE: 1664/440487
| CURRENT APPLICATION NUMBER: US/09/818,943
| CURRENT FILING DATE: 2000-03-28
| NUMBER OF SEQ ID NOS: 7
| SOFTWARE: Patentin version 3.0
| SEQ ID NO 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                              191 LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                           241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PKFPHTYPRNMVLVWRLVANDENVRIQLTFDERFGLEDPEDDICKYDFVEVEREPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MLLLGLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 LSLDLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYRPTWQLLGKAFLYGKKSKVVNINL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MILLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                              VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 1848; DB 9;
100.0%; Pred. No. 1.2e-166;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 7, Application US/09852209A
Patent No. US20020164687A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.
Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: PRT
; ORGANISM: Murinae gen. 8P.
US-09-818-943-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-852-209A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 345
                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
  121
                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                 181
```

g ઠે ద ò g ઠે g ò ద ò

120 180

9 9

Pred. No. 1.2e-166;

```
Matches 345; Conservative
         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 345
                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                               ò
                                                                                          g
                                                                                                                                   ઠે
                                                                                                                                                                    g
                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       임
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRWCGSGTVPGKQTSKGNHIRIRPVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GRWCGSGTVPGKQTSKGNHIRIRRFVSDEYFPSEPGFCHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEBPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                        DB 11; Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-139-583-43

US-10-139-583-43

Sequence 43, Application US/10139583

Sequence 43, Application US/10139583

Sequence 43, Application:
Sequence 43, Application:
Sequence 43, Application:
APPLICANT: Gao, Zeren
APPLICANT: Piddington, Christopher S.
APPLICANT: Sheppard, Paul O.
APPLICANT: Shepmark, Kimberly E.
APPLICANT: Globertson, Debra G.
APPLICANT: Globertson, Debra G.
TITLE OF INVENTION: GROWTH PACTOR HOMOLOG ZVEGF3

TITLE OF INVENTION: Become and Companies of CURRENT APPLICATION NUMBER: US/10/139,583

CURRENT FILING DATE: 1999-12-07

NUMBER OF SEQ ID NOS: 50

SEQ ID NO 43

LENGTH: 345

TYPE: PRT

CREANT: RESPECT OF Windows Version 3.0

SEQ ID NO 43

US-10-139-583-43
                                                                                                                                                                                                                                                                                                                      Query Match 100.0%; Score 1848; DB 11; Best Local Similarity 100.0%; Pred. No. 1.2e-166; Matches 345; Conservative 0; Mismatches 0;
CURRENT FILING DATE: 2001-06-06
PRIOR APPLICATION NUMBER: US/09/564,595
PRIOR FILING DATE: 2000-05-03
PRIOR PLING DATE: 2000-05-03
PRIOR PLING DATE: 1999-05-03
PRIOR PILING DATE: 1999-05-03
PRIOR PILING DATE: 1999-11-10
PRIOR PILING DATE: 1999-11-10
PRIOR PILING DATE: 2000-02-04
NUMBER OF SEQ ID NOS: 57
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 35
LENGTH: 345
                                                                                                                                                                                                                                                              ORGANISM: Mus musculus US-09-876-813-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

DB 13; Length 345;

100.0%; Score 1848;

Query Match

```
ö
                                                                                                                                                                                                                                                                                                                                                                                  GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                         121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSLDLLANAVTAFSTLEELIRYLEPDRMQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                 61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFPSDGSVL 120
                                                                                                                                                                                                                                                                                       61 PKFPHTYPRNMVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 LSLDLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKEKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LKEBUKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                  1 MILIGILILITSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVYTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MLLIGILLILTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                               1 MLLLGLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA CODING
                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 1848; DB 14; Length 345; Best Local Similarity 100.0%; Pred. No. 1.2e-166; Matches 345; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VIKKYHEVIQLRPKTGVKGLHKSLIDVALEHHEECDCVCRGNAGG 345
                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-LU-111-600-7

Sequence 7. Application US/10131600

Publication No. US20030082670A1

GENERAL INFORMATION:

APPLICANT: BRIKSSON, U1f

APPLICANT: LEE, Xuri

APPLICANT: LEE, Xuri

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

APPLICANT: DESTRAN, Annica

CURRENT APPLICATION NUMBER: GO/110, 749

PRIOR FILING DATE: 1999-11-12

PRIOR PELICATION NUMBER: GO/113, 002

PRIOR PELING DATE: 1999-12-03

PRIOR PELING DATE: 1999-05-21

PRIOR PELING DATE: 1999-05-21

PRIOR PELING DATE: 1999-05-21

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15

PRIOR PELING DATE: 1999-07-15
100.0%; Prec. ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Murinae gen. sp. US-10-131-600-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
```

```
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PKFPHTYPRNMYLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVBEPSDGSVL 120
                                                                                                              181 LSLDLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                               61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                             121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                           LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                          LKEEVKLYSCTPRNFSVSIRBELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLGLLLLTSALAGORTGTRAESNLSSKLOLSSDKEONGVODPRHERVVTISGNGSIHS 60
1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 1848; DB 14; Length 345; 100.0%; Pred. No. 1.2e-166; ive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Gilberteon, Debra G.
TITLE OF INVENTION METHOD OF TREATING FIBROSIS
FILE REFERENCE: 00-53
CURRENT APPLICATION NUMBER: US/10/264,361
CURRENT FILING DATE: 2002-10-03
FRIOR APPLICATION NUMBER: US/09/695,121
FRIOR APPLICATION NUMBER: US/09/695,121
NUMBER OF SEQ ID NOS: 18
SEQ ID NOS: 18
SEQ ID NOS 4
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/10264361 Publication No. US20030087870A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0
Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT
; ORGANISM: Mus musculus
US-10-264-361-4
                                                                                                                                                                                                                                                                                                                                                                                       US-10-264-361-4
                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                          g
                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                           ò
                                                                                                                      셤
                                                                                                                                                        ò
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
```

æ

RESULT

```
GENERAL INFOGRATION:

JAPPLICANT: EXIKSSON, Ulf
APPLICANT: EXIKSSON, Ulf
APPLICANT: EXIKSSON, Ulf
APPLICANT: COLUM, Desire
TITLE OF INVENTION: COMPOSITION AND METHOD FOR MODULATING VASCULOGENESIS AND ANGIOGEN
FILE REFERENCE: 02065.44740(3)
CURRENT APPLICATION NUMBER: US 09/410,349
FRIGE APPLICATION NUMBER: US 09/410,349
FRIGH APPLICATION NUMBER: US 60/102,461
FRIGH APPLICATION NUMBER: US 60/102,461
FRIGH APPLICATION NUMBER: US 60/108,109
FRIGH APPLICATION NUMBER: US 60/108,109
FRIGH APPLICATION NUMBER: US 60/113,002
FRIGH APPLICATION NUMBER: US 60/113,002
FRIGH APPLICATION NUMBER: US 60/113,426
FRIGH APPLICATION NUMBER: US 60/113,426
FRIGH APPLICATION NUMBER: US 60/113,426
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING DATE: 1999-01-15
FRIGH FILING D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PKFPHTYPRNMYLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEREFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MILIGILILITSALAGORTGTRAESNISSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GRWCGSGTVPGKQTSKGNBIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSFSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLLLGLLLLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
US-10-664-432-4
US-10-664-432-4
; Sequence 4, Application US/10664432
; Publication No. US20040043031A1
; GENERAL INFORMATION:
GAPPLICANT: Hart, Charles E.
; APPLICANT: Gilbertson, Debra G.
; TITLE OF INVENTION: METHODS FOR PROMOTING GROWTH OF BONE,
; FILLE REFERENCE: 00-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 1848; DB 15;
100.0%; Pred. No. 1.2e-166;
tive 0; Mismatches 0;
Sequence 7, Application US/1030
Publication No. US20030211994A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 100. Matches 345; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Murinae gen. sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-303-997B-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
```

```
LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
US-10-664-432-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-664-432-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                            ч
                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                            ઠે
                                                                                                                                                                                                                 윱
                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 7, Application US/10439337A
Publication No. US20040053837A1
GENERAL INFORMATION:
APPLICANT: LI, Xuri
APPLICANT: ERRESSON, UIf
APPLICANT: COLLUM, Desire
TITLE OF INVENTION: COMPOSITION AND METHOD FOR MODULATING VASCULOGENESIS AND
                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 LSLDLIANNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAPLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                  PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEBSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                             61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 LKEEVKLYSCTPRNFSVSIREELKRIDIIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                          1 MLLIGLILLTSALAQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                    1 MILLGLLILTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                               Query Match 100.0%; Score 1848; DB 15; Length 345; Best Local Similarity 100.0%; Pred. No. 1.2e-166; Matches 345; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: ANGIOGENESIS
FILE REFERENCE: 029065.44740C4
CURRENT APPLICATION NUMBER: US/10/439,337A
CURRENT FILING DATE: 2003-05-16
PRIOR APPLICATION NUMBER: US 09/410,349
PRIOR PILING DATE: 1999-09-30
PRIOR PILING DATE: 1999-09-30
PRIOR PILING DATE: 1998-09-30
PRIOR PILING DATE: 1998-09-30
PRIOR PILING DATE: 1998-0-30
PRIOR PILING DATE: 1998-0-30
PRIOR PILING DATE: 1998-10-3
PRIOR PILING DATE: 1998-12-03
PRIOR PILING DATE: 1998-12-03
PRIOR PILING DATE: 1998-12-03
PRIOR PILING DATE: 1998-12-03
PRIOR PILING DATE: 1998-12-18
PRIOR PILING DATE: 1999-12-18
PRIOR PILING DATE: 1999-12-18
PRIOR PILING DATE: 1999-12-18
PRIOR PILING DATE: 1999-12-18
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
PRIOR PILING DATE: 1999-07-15
; CURRENT APPLICATION NUMBER: US/10/664,432; CURRENT FILING DATE: 2003-09-19; NUMBER OF SEQ ID NOS: 5; SOFTWARE: FastSEQ for Windows Version 3.0; SEQ ID NO 4; LENGTH: 345; TYPE: PRT: ORGANISM: Mus musculus US-10-664-432-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 345
                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                             PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                              61 PKFPHTYPRNMVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GRWCGSGTVPGKQTSKGNHIRIRFYSDBYFPSEPGFCIHYSIIMPOVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSEDELINNAVTAFSTEEELIRYLEPDRAQVDEDSLYKPTAQELGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LKEEVKLYSCTPRNPSVSIREELKRTDTIPWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSLDLIANAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                  1 MILLGLLLTSALAGÓRTGTRAESNLSSKLÓLSSDKEGNGVODPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MLLIGLILLTSALAGQRIGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PKFPHTYPRNMVLVWRLVAVDBNVRIQLTFDERFGLEDPEDDICKYDFVEVEBFSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSLDLLINNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                          MLLLGLLLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLLGLLLLTSALAGORTGTRAESNLSSKLOLSSDKEONGVODPRHERVVTISGNGSIHS
                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                           Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 1848; DB 16; Length 345; Best Local Similarity 100.0%; Pred. No. 1.2e-166; Matches 345; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 VIKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCKGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Hart, Charles B.
APPLICANT: Hart, Charles B.
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: METHODS FOR PROMOTING GROWTH OF BONE,
TITLE OF INVENTION: LIGAMENT AND CARTILAGE
FILE REFERENCE: 00-12
CURRENT APPLICATION NUMBER: US/10/664,432
CURRENT PILING DATE: 2003-09-19
NUMBER OF SEQ ID NOS: 5
SOFTWARE: FASELSEQ for Windows Version 3.0
                                                                                                                     100.0%; Score 1848; DB 15;
100.0%; Pred. No. 1.2e-166;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Sequence 4, Application US/10664432; Publication No. US20040228870A9; GENERAL INFORMATION:
                                                                                                               Query Match
Best Local Similarity 100.0
Matches 345; Conservative
; TYPE: PRT
; ORGANISM: Murinae gen. sp.
US-10-439-337A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Mus musculus
```

ø

```
; Sequence 43, Application US/11021088; Publication No. US20050159358A1
                                                                                                                                                                                                                                                                                        Query Match 100.
Best Local Similarity 100.
Matches 345; Conservative
                                                                                                                                                                                          LENGTH: 345
TYPE: PRT
CRGANISM: Mus musculus
US-10-938-375-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Mus musculus US-11-021-088-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 43
LENGTH: 345
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-11-021-088-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                     日
                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300 241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PKFPHTYPRNMVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 LSLDLLUNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAPLYGKKSKVVNLNL 240
241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                        241 LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MILIGELELITSALAGQRIGTRAESNESSKLQLSSDKEQNGVQDPRHERVVIISGNGSIHS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MILLIGLILLTSALAGQRTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 1848; DB 16; Length 345; Best Local Similarity 100.0%; Pred. No. 1.2e-166; Matches 345; Conservative 0; Mismatches 0; Indels 0;
                                                                        301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                              APPLICANT: Gilbert, Teresa
APPLICANT: Gilbert, Teresa
APPLICANT: Hart, Charles E.
APPLICANT: Hart, Charles E.
APPLICANT: Hart, Charles E.
APPLICANT: Sheppard, Paul O.
TITLE OF INVENTION: GROWTH FACTOR HOWOLOG ZVEGF4
FILE REFERENCE: 99-19
CURRENT APPLICATION NUMBER: US/09/876,813
CURRENT PILING DATE: 2004-06-05
PRIOR FILING DATE: 2000-05-03
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/164,463
PRIOR PLILNG DATE: 1999-01-10
PRIOR PLILNG DATE: 1999-11-10
PRIOR FILING DATE: 1999-11-10
PRIOR FILING DATE: 1999-11-10
PRIOR FILING DATE: 2000-02-04
NUMBER OF SEQ ID NOS: 57
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 35
LENGTH: 345
TYPE: PRT
TYPE: PRT
                                                                                                                                                                                                          Sequence 35, Application US/10877623
Publication No. US20040242850A1
GENERAL INFORMATION:
                                                                                                                                                                                          US-10-877-623-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-877-623-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-938-375-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                          ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
ઠે
                              g
                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

Sequence 4, Application US/10938375 Publication No. US20050049218A1 GENERAL INFORMATION:

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEFEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MILLGELELTSALAGORIGERAESNESSKLOESSDKEQNGVQDPRHERVVITSGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GRWCGSGTVPGKQTSKGNHIRIRRFVSDEYFPSEPGFCHYSIIMPQVTETTSPSVLPPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MILLGILLITSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                             Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VIKKYHEVLQLRPKTGVKGLHKSLIDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 1848; DB 20;
100.0%; Pred. No. 1.2e-166;
ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                             DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Gao, Zeren
APPLICANT: Hart, Charles E.
APPLICANT: Hart, Charles E.
APPLICANT: Sheppard, Paul O.
APPLICANT: Sheppard, Paul O.
APPLICANT: Shoemaker, Kimberly E.
APPLICANT: Gilbertson, Debra G.
APPLICANT: Gilbertson, Debra G.
APPLICANT: West, James W.
TITLE OF INVENTYON: GROWN FACTOR HOMOLOG ZVEGF3
FILE REFERENCE: 98-60C1
CURRENT APPLICATION NUMBER: US/11/021,088
CURRENT FILING DATE: 2004-12-22
PRIOR APPLICATION NUMBER: US/09/541,752
PRIOR FILING DATE: 2000-03-31
                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 1848; DB 17;
100.0%; Pred. No. 1.2e-166;
iive 0; Mismatches 0;
APPLICANT: Gilbertson, Debra G.
TILLE OF INVENTION: METHOD OF TREATING FIBROSIS
FILE REFERENCE: 00-53
CURRENT APPLICATION NUMBER: US/10/938,375
CURRENT FILING DATE: 2004-09-10
PRIOR APPLICATION NUMBER: US/09/695,121
PRIOR FILING DATE: 2000-10-23
NUMBER OF SEQ ID NOS: 18
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 50
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.
Best Local Similarity 100.
Matches 345; Conservative
```

```
8 8 8
                                                                                                               임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                          PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                                          121 GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                       241 LKEEVKLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LSLDLLANAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                  PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL 120
                                                                                                                                       GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                            LSLDLLNNAVTAFSTLEELIRYLEPDRWQVDLDSLYKPTWQLLGKAFLYGKKSKVVNLNL 240
                                                                                                                                                                                                                                                                                  LKEEVKLYSCTPRNFSVSIREELKRIDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPRK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PKFPHTYPRNMVLVWRLVAVDENVRIQLIFDERFGLEDPEDDICKYDFVEVEFSDGSVL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GRWCGSGTVPGKQTSKGNHIRIRFVSDEYFPSEPGFCIHYSIIMPQVTETTSPSVLPPSS 180
9
                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                1 MILIGILILITSALAGQRIGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                1 MILIGILILITSALAGQRIGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PKFPHTYPRNMVLVWRLVAVDENVRIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MILLIGLILLTSALAGORTGTRAESNLSSKLQLSSDKEQNGVQDPRHERVVTISGNGSIHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 1848; DB 20; Length 345; Best Local Similarity 100.0%; Pred. No. 1.2e-166; Matches 345; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                       VTKKYHEVLQLRPKTGVKGLHKSLTDVALEHHEECDCVCRGNAGG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 35, Application US/11080803
Publication No. US20050164937A1
GENERAL INFORMATION:
APPLICANT: Gilbert, Teresa
APPLICANT: Gilbert, Teresa
APPLICANT: Gilbertson, Debra G.
TITLE OF INVENTION: GROWTH FACTOR HOMOLOG ZVEGF4
FILE REFERENCE: 99-19
FURRENT APPLICATION NUMBER: US/09/876,813
FRIOR PILING DATE: 2005-03-15
FRIOR PILING DATE: 1999-05-03
FRIOR PILING DATE: 1999-05-03
FRIOR FILING DATE: 1999-05-03
FRIOR PILING DATE: 1999-05-03
FRIOR PILING DATE: 1999-11-10
FRIOR FILING DATE: 2000-02-04
NUMBER OF SEQ ID NUMBER: US 60/180,169
FRIOR FILING DATE: 2000-02-04
NUMBER OF SEQ ID NOS: 53
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 35
TYPE: PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , ORGANISM: Mus musculus US-11-080-803-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
US-11-080-803-35
                                                                  61
                                                                                                  61
                                                                                                                                     121
                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                             중 음
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                       ઠ
                        ద
                                                           ઠે
                                                                                         8 S
                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

WASW MILLE TORY SILL

OLISSII WINTER FRING SIHL